Catalogue
OF
Neuropterous Insects.
Part III.

1853. 1s. 6d.

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LIST

OF THE

SPECIMENS

OF

NEUROPTEROUS INSECTS

IN

THE COLLECTION

OF THE

BRITISH MUSEUM.

PART III.—(TERMITIDÆ—EPHEMERIDÆ).

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INTRODUCTION.

The principal object of the present Catalogue has been to give a complete list of the specimens of Neuropterous Insects contained in the collection of the British Museum, indicating at the same time the peculiarities of each, as regards variation of character, locality, and the source from whence it has been derived. With this view, the different individuals of each species contained in the collection are indicated by the letters *a*, *b*, *c*, &c., following the name of the species and its synonymes, and the description, if it appeared to have been before undescribed.

This part of the Catalogue of Neuropterous Insects has been prepared and the new species described by Mr. Francis Walker, so well known for his attention to this order of Insects.

The continuation is in hand, and will follow as soon as it is completed.

JOHN EDWARD GRAY.

British Museum,
April, 1853.

CATALOGUE

OF

NEUROPTEROUS INSECTS.

Sub-order 4. CORRODENTIA.

Mandibulæ magnæ, corneæ, corrosivæ, maxillarum mando cornea, in apice dentata. Pedes ambulatorii, tarsis 2-5-articulatis. Alæ membranaceæ, homonomæ, venis transversis paucioribus vel nullis.

Corrodentia, p., *Burmeister.*

Fam. 1. PSOCIDÆ.

Palpi labiales nulli. Tarsi 2-3-articulati. Alæ vel nullæ vel inæquales, venis corneis expansæ.

Termes, p., *Linn.*
Hemerobius, p., *Linn.; Turt.*
Psoquilii, *Latr.*
Psocidæ, *Leach; Steph.; Westw.*
Psocina, *Burm.*
Psocides, *Ramb.*
Psocina Psocidæ, *Newman.*

"Head exserted: eyes hemispherical, widely distant: mandibles corneous: antennæ long, setaceous, multi-articulate: thorax narrow: abdomen with two caudal papillæ: wings recumbent, deflected; fore-wings ample, variously veined; hind-wings smaller, with fewer veins, slightly folded longitudinally: larva generally arboreal: pupa with rudimentary wings at the posterior angles of the wing-bearing segments."—*Newman.*

Genus 1. THYRSOPHORUS.

Caput angustum. Oculi minimi. Ocelli fere contigui. Antennæ hirsutæ, apud medium incrassatæ. Prothorax elevatus, gibbosus. Tibiæ anteriores compressæ, subdilatatæ; tarsi articulis duobus distinctis. Alæ vena cubitali simplici.

Thyrsophorus, *Burm. Handb. Ent.* ii. 2, 781. *Ramb. Hist. Nat. Ins. Neur.* 318.

Head narrow: eyes very small: ocelli almost contiguous: feelers tumid towards the middle: prothorax elevated and gibbous: anterior shanks compressed, slightly dilated: tarsi with only two distinct joints, the first thrice the length of the second.

1. Thyrsophorus speciosus.

Fuscus; capite, thorace, femoribusque ferrugineis; tibiis compressis hirtis; alæ anticæ maculis tribus costalibus albis.

Thyrsophorus speciosus, *Klug, MSS. Burm. Handb. Ent.* ii. 2, 782, 1.

Pará.

2. Thyrsophorus pennicornis.

Fuscus; pedibus alisque testaceis, his venis albis, mediis reticulatis.

Thyrsophorus pennicornis, *Burm. Handb. Ent.* ii. 2, 782, 2.

Bahia.

3. Thyrsophorus Spinolæ.

Rufus; antennæ nigræ basi fulvæ; abdomen, tibiæ tarsique nigra; alæ anticæ nigro-fuscæ, basi pallidiores, fasciis abbreviatis apud stigma alba rufa duabusque flavis ornatæ.

Thyrsophorus Spinolæ, *Ramb. Hist. Nat. Ins. Neur.* 318.

Third joint of the antennæ with minute, thin pubescence along one half from the base, with long, thick pubescence from thence to the tip: fore-wing with two discal areolets; the first nearly twice the size of the second, emitting a vein to the hind border; the second also emitting a vein to the hind border, and two veins towards the tip of the wing, of these the fore one ends in front of the tip of the wing, and the hind one shortly forms three branches, of which the fore one ends at the tip of the wing, and the middle one is shortly forked.

a. Pará. Presented by J. P. G. Smith, Esq.

4. Thyrsophorus leucotelus.

Piceus; caput fulvum; antennæ nigræ basi fulvæ; thorax fulvo varius; pedes fulvi, metatarso postico albido; alæ limpidæ, anticæ luteo albido fuscoque variæ, venis nigricantibus apud discum albis.

Third joint of the antennæ with more equal pubescence along the whole length: fore-wing with two discal areolets; the first very much larger than the second, emitting a vein to the hind border; the second also emitting a vein to the hind border, and two veins towards the tip of the wing, of these the fore one ends in front of the tip of the wing, and the hind one is shortly forked, the fore fork ends at the tip of the wing, the hind one is nearly parallel to it and emits two branches to the hind border, one near its base, the other near its tip. Pitchy: head tawny: antennæ black, pubescent, very much longer than the body; first, second and third joints tawny, third black towards the tip: thorax gibbous; its sides and the borders of its segments tawny: legs tawny, stout, pubescent; hind metatarsus whitish: fore-wings limpid in front except at the base and about the stigma where they are luteous, and in front of the tip where they are whitish; hind part mostly brown; veins blackish, mostly

white in the disk: hind-wings limpid. Length of the body 2½ lines; of the wings 9 lines.

a. Pará. From Mr. Stevens' collection.

5. Thyrsophorus ramosus.

Piceus; caput fulvum; antennæ nigræ basi fulvæ; thorax flavo varius; tibiæ flavæ; tarsi nigricantes; alæ anticæ fuscæ, basi et ad costam limpidæ, apud stigma rufo-fuscæ albo strigatæ.

Third joint of the antennæ with the pubescence of almost equal thickness along the whole length: fore-wing with two discal areolets; the first a little larger than the second, omitting a vein to the hind border; the second also emitting a vein to the hind border and two towards the tip of the wing, of these the fore one ends in front of the tip of the wing, and the hind one is shortly forked, the fore fork ends at a little in front of the tip of the wing, the hind one has a branch near its base and another a little beyond one-third of its length: the two discal areolets and some space beyond them are adorned with numerous little ramose veinlets, which proceed from the borders to the disks and are here and there united. Pitchy: head tawny: antennæ black, pubescent, full twice the length of the body; first, second and third joints tawny; third black towards the tip: thorax yellow on each side and along the borders of the segments: legs pubescent, stout; tibiæ yellow; tarsi blackish: fore-wings brown, limpid at the base and along the fore border except about the stigma where they are reddish brown; a whitish streak between the stigma and the tip; veins blackish; transverse veinlets in the disk white: hind-wings limpid, slightly gray at the tips. Length of the body 2 lines; of the wings 9 lines.

a. Pará. From Mr. Stevens' collection.

6. Thyrsophorus anticus.

Fulvus; caput antice flavum; antennæ luteæ apice nigræ; tarsi apice ferruginei; alæ limpidæ, anticæ vittis duabus ferrugineis, una apice alba, altera apice fusca.

Third joint of the antennæ equally pubescent from the base to the tip: fore-wing with two discal areolets; the first full four times

the breadth of the second, emitting a vein to the hind border; the second also emitting a vein to the hind border, and two towards the tip of the wing, of these the fore one ends in front of the tip of the wing, the hind one is very near the fore one and ends at a little in front of the tip of the wing; it emits two branches, one at one-third, the other at a little beyond two-thirds of the length: dorsum of the thorax forming a high horn which is slightly inclined forward. Tawny: head yellow in front: antennæ luteous, pubescent, nearly twice the length of the body; third and following joints towards the tips, and the whole of the last joint black: legs stout, pubescent, second joint of the tarsi ferruginous: wings limpid; fore-wings with two ferruginous stripes from the middle to the tips, the first costal with a white tip, the second discal with a brown tip; veins mostly yellow in the disk. Length of the body 2 lines; of the wings 10 lines.

a. Pará. Presented by J. P. G. Smith, Esq.

Genus 2. PSOCUS.

Antennæ simplices, setaceæ. Tarsi biarticulati. Alæ vena cubitali furcata.

Hemerobius, p., *Linn.*; *Berk.*; *Coqueb.*; *Stew.*
Psocus, p., *Fabr.*
Psocus, *Latr.*; *Panz.*; *Leach*; *Steph.*; *Burm.*; *Ramb.*
Chermes, p., *Roemer.*
Psocus et Cœcilius, *Curt.*

Div. 1. *Steph.*

Alæ anticæ areola discali transversa subquadrata.

Subdiv. 1. *Steph.*

Alæ anticæ vena 1a bifurcata.

Sect. 1. *Steph.*

Alæ variegatæ; venæ vix distinctæ.

Subsect. 1. *Steph.*

Antennæ pilosissimæ.

1. Psocus pilicornis.

Niger; antennæ longe pilosæ; alæ anticæ maculis nebulisque nigricantibus.

Psocus pilicornis, *Latr. Coqueb. Ill. Iconograph.* 13, pl. 2, fig. 12. *Steph. Ill. Brit. Ent. Mand.* vi. 117, 1. *Burm. Handb. Ent.* ii. 2, 779, 22.

a, *b*. England.
c. France.

2. Psocus picicornis.

Niger; antennæ piceæ; alæ anticæ albo fuscoque variæ.

Psocus picicornis, *Fabr. Ent. Syst. Suppl.* 204, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 118, 2.
Hemerobius picicornis, *Turt. Syst. Nat.* iii. 402.

a, *b*. England.

Subsect. 2. *Steph.*

Antennæ nudæ, aut vix pilosæ.

3. Psocus fasciatus.

Flavus; caput et thorax lituris fuscis; abdomen nigrum; alæ anticæ hyalinæ, fasciis tribus atomisque numerosis nigris.

Hemerobius fasciatus, *Fabr. Ent. Syst.* ii. 85, 17.
Psocus fasciatus, *Fabr. Ent. Syst. Suppl.* 203. *Turt. Syst. Nat.* iii, 402. *Panz. Faun. Ins. Germ.* xciv. f. 20. *Steph. Ill. Brit. Ent. Mand*, vi. 118, 3. *Zett. Ins. Lapp.* 1052, 2.

a—*d*. England.

4. Psocus variegatus.

Niger; frons, thorax supra et abdomen ochracea; alæ anticæ nigricantes atomis albis.

Hemerobius variegatus, *Fabr. Ent. Syst.* ii. 85, 18.
Psocus variegatus, *Latr. Coqueb. Ill. Icon.* 13, pl. 2, f. 13. *Steph. Ill. Brit. Ent. Mand.* vi. 118, 4. *Burm. Handb. Ent.* ii. 2, 778, 11. *Ramb. Hist. Nat. Ins. Neur.* 332, 12.

Europe.

5. Psocus atomarius.

Piceus; caput flavum; pedes pallidi; alæ anticæ fuscæ atomis albis, stigmate semiflavo.

Psocus atomarius, *Steph. Ill. Brit. Ent. Mand.* vi. 118, 5.

England.

6. Psocus maculatus.

Piceus; antennæ pallidæ; pedes pallidi; alæ anticæ hyalinæ maculis remotis fuscis sparsis.

Psocus maculatus, *Steph. Ill. Brit. Ent. Mand.* vi. 119, 6.

England.

7. Psocus subfasciatus.

Ochraceus; caput et thorax nigro variegata; abdomen piceum; pedes pallidi; alæ anticæ hyalinæ fasciis duabus maculisque variis fuscis.

Psocus subfasciatus, *Steph. Ill. Brit. Ent. Mand.* vi. 119, 7.

England.

Sect. 2. *Steph.*

Alæ non variegatæ ; venæ distinctæ.

Subsect. 1. *Steph.*

Areola discalis venula radiata clausa.

8. Psocus fuscipennis.

Fuscus ; alis concoloribus, venis, fascia baseos arcuata, antennisque basi pallidis.

Psocus fuscipennis, *Burm. Handb. Ent.* ii. 2, 778, 9.
Brazil.

9. Psocus venosus (Nomen bis lectum).

Fuscus ; alis concoloribus, venis basalibus stigmateque albis.

Psocus venosus, *Burm. Handb. Ent.* ii. 778, 10.
North America.

10. Psocus magnus.

Fuscus ; segmenta flavo marginata ; antennæ nigræ basi fuscæ ; pedes testacei ; alæ anticæ fuscæ, stigmate venisque flavis, his apice nigris, alæ posticæ subcinereæ venis nigris.

Antennæ minutely pubescent, more than twice the length of the body: fore-wings with a quadrate transverse discal areolet: longitudinal vein beneath the stigma deeply furcate. Brown, smooth: antennæ black, brown at the base: segments of the thorax and of the abdomen with yellow borders: legs testaceous; femora paler than the tibiæ; second joint of the tarsus half the length of the first: fore-wings brown; stigma yellow, large, triangular; veins yellow, black towards the tips; outer angle of discal areolet emitting two veins, the fore one extending to the tip of the wing and

emitting two forks to the hind border: hind-wings grayish with black veins. Length of the body $1\frac{3}{4}$ line; of the wings 7 lines.

a, *b*. Mount Pleasant, Ohio. Presented by the Entomological Club.

11. Psocus lineatus.

Ochraceus, fusco maculatus; caput lineis rufo-fuscis; alæ anticæ basi nigro fasciatæ.

Psocus lineatus, *Latr. Coqueb. Ill. Icon.* 12, pl. 2, fig. 8. *Steph. Ill. Brit. Ent. Mand.* vi. 119, 8. *Burm. Handb. Ent.* ii. 2, 780, 18. *Ramb. Hist. Nat. Ins. Neur.* 319, 2.
Chermes Buxi, *Roem. Gen. Ins.* 16, pl. 11, fig. 7.

a. England. Presented by F. Walker, Esq.
b—d. England.

12. Psocus Novæ Scotiæ.

Nigro-fuscus, flavo varius; antennæ nigræ; pedes testacei, tibiis apice tarsisque piceis; alæ limpidæ, anticæ fusco quadrimaculatæ.

Very nearly allied to *P. lineatus*.

Dark brown: head pale yellow, with two black spots behind, and two more contiguous between the eyes; disk of front brownish: palpi yellow with black tips: antennæ black, more than twice the length of the body: underside and borders of the segments of the thorax and of the abdomen pale yellow: legs testaceous, pubescent; tibiæ towards the tips and tarsi piceous; second joint of the tarsi a little shorter than the first: wings limpid; fore-wings with four brown spots, one occupying the stigma, one at the tip, and two on the hind border, the basal one joining a darker brown dot; veins black. Length of the body $1\frac{3}{4}$ line; of the wings $5\frac{1}{2}$ lines.

a. Nova Scotia. From Lieut. Redman's collection.

13. Psocus nebulosus.

Ochraceus; caput fusco lineatum; thorax maculis nigris; abdomen piceum; pedes pallidi; alæ anticæ hyalinæ venis nebulisque aliquot fuscis.

Psocus nebulosus, *Kirby, MSS.?* *Steph Ill. Brit. Ent. Mand.* vi. 119, 9.
Psocus nebulosus? *Burm. Handb. Ent.* ii. 2, 780, 17.

Luteus, fusco maculatus; fronte lineis 16 *fuscis convergentibus arcuatis; alis anticis fusco nebulosis.*

Psocus infuscatus? *Ramb. Hist. Nat. Ins. Neur.* 319, 1.
Mas? Psocus affinis? *Ramb. Hist. Nat. Ins. Neur.* 320, 4.

a. England.

14. Psocus similis.

Nigricans; antennæ nigræ; abdomen piceum; pedes picei; alæ immaculatæ, anticæ fuscescentes venis fuscis, posticæ subhyalinæ.

Psocus similis, *Kirby, MSS.?* *Steph. Ill. Brit. Ent. Mand.* vi. 120, 10.

a. England.

15. Psocus bifasciatus.

Flavo nigroque variegatus; alæ anticæ fasciis duabus transversis punctoque nigris.

Psocus bifasciatus, *Latr.* *Coqueb. Ill. Icon.* ii. pl. 2, fig. 4. *Steph. Ill. Brit. Ent. Mand.* vi. 120, 11. *Burm. Handb. Ent.* ii. 2, 780, 15.

a. England. Presented by J. C. Dale, Esq.
b—e. England.

16. Psocus striatus.

Piceus, flavo varius; caput testaceum fusco varium; pedes testacei, tibiis apice tarsisque fuscis; alæ limpidæ, anticæ fusco unimaculatæ et fasciatæ apice cinereæ.

Very nearly allied to *P. bifasciatus*.

Piceous: head testaceous, adorned between the eyes with numerous confluent brown dots which form a broad stripe, and have on each side an oblique stripe formed of three brown dots: front

with numerous brown streaks: clypeus piceous: borders of the segments of the thorax and of the abdomen yellow: legs testaceous, stout, pubescent; tarsi and tips of the tibiæ brown; second joint of the tarsi one-third of the length of the first: wings limpid; forewings gray towards the tips; stigma brown, from its base an irregular, interrupted, oblique, partly dark, partly pale brown band traverses the wing, which has also a brown spot in the disk behind the stigma; veins black. Length of the body 1¼ line; of the wings 4 lines.

a—d. Nova Scotia. From Lieut. Redman's collection.

17. Psocus contaminatus.

Piceus, nigro variegatus; antennæ fuscæ; pedes fusci; alæ anticæ fasciis duabus transversis basim versus stigmateque fuscis.

Psocus contaminatus, *Kirby, MSS.?* *Steph. Ill. Brit. Ent. Mand.* vi. 120, 12.

England.

18. Psocus megastigmus.

Ochraceus; caput fusco lineatum; thorax fusco nebulosus; alæ hyalinæ, anticæ fascia obsoleta media macula stigmateque magno, fuscis.

Psocus megastigmus, *Steph. Ill. Brit. Ent. Mand.* vi. 120, 13.

England.

19. Psocus subnebulosus.

Ochraceus, nigro variegatus; antennæ et pedes pallida; alæ hyalinæ, anticæ nebulis fuscescentibus.

Psocus subnebulosus, *Steph. Ill. Brit. Ent. Mand.* vi. 121, 14.

England.

Subsect. 2. *Steph.*

Areola discalis apud apicem interiorem aperta.

20. Psocus longicornis.

Niger; os pallidum; antennæ longæ, fuscæ; pedes pallidi; alæ anticæ hyalinæ stigmate fusco.

Hemerobius longicornis, *Fabr. Ent. Syst.* ii. 84, 14. *Turt. Syst. Nat.* iii. 402.
Psocus longicornis, *Fabr. Ent. Syst. Suppl.* 203, 1. *Udd. Diss. Nov. Ins.* 26, 52. *Panz. Faun. Ins. Germ.* xciv. f. 19. *Steph. Ill. Brit. Ent. Mand.* vi. 121, 15. *Burm. Handb. Ent.* ii. 777, 6. *Zett. Ins. Lapp.* 1052, 1. *Ramb. Hist. Nat. Ins. Neur.* 320, 3.
Psocus vitripennis, *Curt. Brit. Ent.* 648, 28.

a—c. England. Presented by F. Walker, Esq.
d. England.

21. Psocus immunis.

Fuscus, flavo variegatus; antennæ basi et pedes luteo-ochraceæ; alæ hyalinæ, stigmate subfusco.

Psocus immunis, *Steph. Ill. Brit. Ent. Mand.* vi. 121, 16.
Psocus Naso? *Ramb. Hist. Nat. Ins. Neur.* 320, 5.

a. England.

22. Psocus venosus.

Ochraceo-rufus; caput et thorax fusco punctata; antennæ fuscæ, articulo 1o luteo; pedes pallidi; alæ limpidæ, venis fuscescentibus.

Psocus venosus, *Steph. Ill. Brit. Ent. Mand.* vi. 121, 17.

a—c. England. Presented by F. Walker, Esq.
d, e. England.

23. Psocus vittatus.

Atro-fuscus; antennæ basi pallidæ; abdomen piceum; pedes pallidi; alæ anticæ vitta lata fusca, venis saturatioribus.

Psocus vittatus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 122, 18.

a. England. Presented by F. Walker, Esq.

24. Psocus ochropterus.

Pallide ochraceus, fusco punctatus; abdomen rufum; pedes flavi; alæ subochraceæ, venis fuscescentibus.

Psocus ochropterus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 122, 19.

Psocus flavidus? *Ramb. Hist. Nat. Ins. Neur.* 322, 9.

a, *b*. England.

25. Psocus flavidus.

Ochraceo-rufus; abdomen flavum; pedes pallidi; alæ hyalinæ, subfuscescentes, venis saturatioribus.

Psocus flavidus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 122, 20.

a, *b*. England. Presented by F. Walker, Esq.

26. Psocus flavicans.

Niger; prothoracæ flavus; abdomen ovatum, flavum; alæ hyalinæ.

Hemerobius flavicans, *Linn. Syst. Nat.* ii. 913; *Faun. Suec.* 512. *Fabr. Ent. Syst.* ii. 86, 22. *Turt. Syst. Nat.* iii. 403.

Psocus flavicans, *Fabr. Ent. Syst. Suppl.* 203, 2. *Steph. Ill. Brit. Ent. Mand.* vi. 122, 21. *Burm. Handb. Ent.* ii. 2, 781, 19. *Zett. Ins. Lapp.* 1054, 8.

Europe.

a. England. Presented by F. Walker, Esq.

b. ——— ? From Mr. Children's collection.

27. Psocus obsoletus.

Pallide rufo-ochraceus; capite postice abdominisque macula dorsali atris; alæ obscure fuscescentes, venis tenuissimis saturatioribus.

Psocus obsoletus, *Steph. Ill. Brit. Ent. Mand.* vi. 123, 22.

a. England.

28. Psocus hyalinus.

Fusco-piceus; abdomen basi ochraceo-flavum; pedes rufo-picei; alæ limpidæ, stigmate fusco.

Psocus hyalinus, *Steph. Ill. Brit. Ent. Mand.* vi. 123, 23.

a, *b*. England.

29. Psocus bipunctatus.

Flavo nigroque varius; alæ hyalinæ, anticæ maculis duabus nigricantibus.

Hemerobius bipunctatus, *Linn. Syst. Nat.*; *Faun Suec.* 1514. *Fabr. Ent. Syst.* ii. 86, 23. *Turt. Syst. Nat.* iii. 403.
Hemerobius Aphidioides, *Schr. Ins. Austr.* 629.
Psylla Aphidioides, *Geoffr. Ins. Par.* i. 488, 7.
Psocus bipunctatus, *Fabr. Ent. Syst. Suppl.* 204, 7. *Latr. Coqueb. Ill. Icon.* ii. pl. 2, f. 3. *Panz. Faun. Ins. Germ.* xciv. f. 21. *Leach, Edin. Encycl.* ix. 139. *Steph. Ill. Brit. Ent. Mand.* vi. 123, 24. *Burm. Handb. Ent.* ii. 779, 14. *Ramb. Hist. Nat. Ins. Neur.* 321, 7.

a—*d*. England. Presented by F. Walker, Esq.
e—*g*. England.

30. Psocus sexpunctatus.

Fuscus; alæ anticæ maculis fuscis punctisque sex distinctis.

Hemerobius sexpunctatus, *Linn. Syst. Nat.* ii. 913; *Faun. Suec.* 1511. *Fabr. Ent. Syst.* ii. 86, 20. *Berk. Syn.* i. 151. *Stew. Elem. Nat. Hist.* ii. 216. *Turt. Syst. Nat.* iii. 402.

Psylla sexpunctatus, *Geoffr. Ins. Par.* ii. 205, 10.
Psocus sexpunctatus, *Latr. Coqueb. Ill. Icon.* 13, pl. 2, f. 10. *Fabr. Ent. Syst. Suppl.* 203. *Steph. Ill. Brit. Ent. Mand.* vi. 123, 25. *Burm. Handb. Ent.* ii. 778, 8.
Psocus irroratus, *Curt. Brit. Ent.* 648.

a, *b*. England. Presented by J. C. Dale, Esq.
c. ———? From Mr. Children's collection.

31. Psocus quadrimaculatus.

Nigro flavoque varius; alæ anticæ maculis quatuor fuscis.

Psocus quadrimaculatus, *Latr. Coqueb. Ill. Icon.* 12, pl. 2, fig. 6. *Steph. Ill. Brit. Ent. Mand.* vi. 124, 26. *Burm. Handb. Ent.* ii. 2, 779, 13.

a. England. Presented by J. C. Dale, Esq.

32. Psocus striatulus.

Fuscus, flavo maculatus; alæ hyalinæ, anticæ fusco striatæ.

Psocus striatulus, *Fabr. Ent. Syst. Suppl.* 203. *Steph. Ill. Brit. Ent. Mand.* vi. 124, 27.
Hemerobius striatulus, *Turt. Syst. Nat.* iii. 402.

England.

33. Psocus flaviceps.

Fuscus; caput ochraceo-flavum; antennæ rufo-piceæ; pedes ochraceo-flavi; alæ hyalinæ, nebulis subfuscescentibus.

Psocus flaviceps, *Steph. Ill. Brit. Ent. Mand.* vi. 124, 28.

England.

34. Psocus subocellatus.

Niger, albido variegatus; antennæ breves; pedes pallidi; alæ hyalinæ, maculis nonnullis subocellatis venisque fuscescentibus.

Psocus subocellatus, *Steph. Ill. Brit. Ent. Mand.* vi. 124, 29.

a, *b*. England.

Subdiv. 2. *Steph.*

Alæ anticæ vena 1a trifurcata.

35. Psocus immaculatus.

Pallide ochraceus; antennæ longæ, fuscescentes; pedes pallidi; alæ limpidæ, venis tenuibus stigmateque fuscescentibus.

Psocus immaculatus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 125, 30.

England.

36. Psocus rufescens.

Rufescente-flavus, nigro maculatus; antennæ longæ; abdominis dorsum subpiceum; pedes ochraceo-pallidi; alæ limpidæ, stigmate concolore.

Psocus rufescens, *Steph. Ill. Brit. Ent. Mand.* vi. 125, 31.

England.

37. Psocus flavescens.

Ochraceo-flavus, immaculatus; antennæ longæ fuscæ; pedes pallide flavescentes; alæ limpidæ, stigmate subfuscescente, venis tenuissimis fuscescentibus.

Psocus flavescens, *Steph. Ill. Brit. Ent. Mand.* vi. 125, 32.

England.

38. Psocus quadripunctatus.

Niger; antennæ, abdomen et pedes pallida; alæ hyalinæ, anticæ basi punctis quatuor atris, apice fusco radiatæ.

Hemerobius quadripunctatus, *Fabr. Ent. Syst.* ii. 86, 24. *Turt. Syst. Nat.* iii. 403.

Psocus quadripunctatus, *Fabr. Ent. Syst. Suppl*, 204, 8. *Latr. Coqueb. Ill. Icon.* 12, pl. 2, f. 9. *Panz. Faun. Ins. Germ.* xciv. 22. *Steph. Ill. Brit. Ent. Mand.* vi. 776, 2. *Burm. Handb. Ent.* ii. 776, 2. *Ramb. Hist. Nat. Ins. Neur.* 321, 8.

Var.? Psocus subfasciatus, *Ramb. Hist. Nat. Ins. Neur.* 322, 10.

a. England. Presented by F. Walker, Esq.
b—f. England.

39. Psocus subpunctatus.

Pallide rufus; antennæ et pedes pallida; alæ subflavescentes nebulis nonnullis obscuris venisque fuscescentibus.

Psocus subpunctatus, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 34.
Psocus conspurcatus? *Ramb. Hist. Nat. Ins. Neur.* 323, 13.

a. England. Presented by F. Walker, Esq.

40. Psocus pupillatus.

Nigro-piceus; antennæ basi fulvæ, alis breviores; femora fulva; alæ cinereæ, anticæ basi fusco apice albido maculatæ.

Psocus pupillatus, *Dale*, *MSS.*

Piceous-black: antennæ minutely pubescent, tawny towards the base, shorter than the wings: legs piceous; femora dull tawny: wings grayish, fore-wings with the disks of the areolets brown, brown towards the tips with whitish spots on the areolets; veins black. Length of the body ¾ line; of the wings 2¼ lines.

a. England. Presented by J. C. Dale, Esq.

41. Psocus costalis.

Testaceo-rufus; caput et thorax fusco punctata; antennæ et pedes pallide rufa; alæ anticæ ad costam præsertim fusco maculatæ.

Psocus costalis, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 35.

a. England.

42. Psocus nervosus (Nomen bis lectum).

Testaceo-rufus; thoracis dorsum et abdomen apice atra; alæ hyalinæ, venis fuscescentibus.

Psocus nervosus, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 36.

England.

43. Psocus maculipennis.

Niger; pedes picei; alæ anticæ fusco-nebulosæ, maculis duabus magnis apicem versus saturatioribus.

Psocus maculipennis, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 37.

England.

Div. 2. *Steph.*

Alæ anticæ areola discali nulla; vena 2a trifida.

44 Psocus nigricornis.

Niger; thoracis latera et pedes rufo-picea; alæ fusco-hyalinæ.

Psocus nigricornis, *Steph. Ill. Brit. Ent. Mand.* vi. 126, 38.

a. England. Presented by F. Walker, Esq.

45. Psocus phœopterus.

Rufo-piceus; antennæ pallide piceo-rufæ, breves, maris subpilosæ; pedes pallide piceo-rufi; alæ hyalinæ, saturate fuscæ.

Psocus phœopterus, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 127, 39.

a, *b*. England. Presented by F. Walker, Esq.
c, *d*. England.

46. Psocus nigricans.

Piceo-testaceus; thorax et abdomen supra nigricantia; pedes pallide testacei; alæ sublimpidæ, venis fuscis.

Psocus nigricans, *Kirby, MSS. Steph. Ill. Brit. Ent. Mand.* vi. 127, 40.
Hemerobius pedicularius? *Vill. Ent. Linn.* iii. 51, 11.
Psocus domesticus? *Burm. Handb. Ent.* ii. 2, 777, 4.
Psocus pedicularius? *Ramb. Hist. Nat. Ins. Neur.* 323, 15.

a, *b*. England.

47. Psocus abdominalis.

Fuscus; antennæ breves, pallidæ; abdomen flavum, ano nigro; pedes pallidi; alæ hyalinæ.

Hemerobius abdominalis, *Fabr. Ent. Syst.* ii. 86. *Turt. Syst. Nat.* iii. 403.
Psocus abdominalis, *Fabr. Syst. Ent.* 204, 9. *Stew. Elem. Nat. Hist.* ii. 217. *Steph. Ill. Brit. Ent. Mand.* vi. 127, 41.
Psocus fenestratus, *Curt. Brit. Ent.* 648. *Burm. Handb. Ent.* ii. 2, 778, 7.

a. England. Presented by J. C. Dale, Esq.

48. Psocus dubius.

Rufo-piceus; antennæ et pedes pallidiora; abdominis dorsum vitta nigricante; alæ hyalinæ, subflavescentes, venis subochraceo-fuscis.

Psocus dubius, *Steph. Ill. Brit. Ent. Mand.* vi. 127, 42.
Psocus pedicularius? *Latr. Coqueb. Ill.* 10, pl. 2, f. 1. *Burm. Handb. Ent.* ii. 776, 3.
Psocus binotatus? *Ramb. Hist. Nat. Ins. Neur.* 323, 14.

a—h. England. Presented by F. Walker, Esq.

Div. ——— ?

49. Psocus strigosus.

Rubro-testaceus; antennis longissimis subglabris; linea verticis, prothoracis maculis tribus, scutelloque fuscis.

Psocus strigosus, *Curt. Brit. Ent.* 648, 26. *Burm. Handb. Ent.* ii. 776, 1.

England.

50. Psocus lasiopterus.

Luteo-fulvus; dorso fusco maculato; alæ luteæ, venis fusco cinctis, longissime pilosis.

Psocus fuscopterus? *Latr. Coqueb. Ill. Icon.* 10, pl. 2, f. 2.
Psocus lasiopterus, *Burm. Handb. Ent.* ii. 2, 777, 5.

Germany.

51. Psocus nervosus.

Fusco-niger, luteo variegatus; fronte lineis 15 *punctorum nigrorum; pedes annulati; alæ anticæ fusco conspersæ, venis albo punctatis.*

Hemerobius nervosus, *Fabr. Ent. Syst.* ii. 85, 19.
Psocus nervosus, *Burm. Handb. Ent.* ii. 2, 780, 16.

Germany.

52. Psocus morio.

Niger, nitens, P. bifasciato *paullo brevior et crassior; antennæ fuscæ, villosulæ; abdomen apice luteum; pedes fusco-pallidi; alæ anticæ cupreo nitentes, basi dimidiate nigræ, puncto marginali triangulari nigro, apice venisque tribus albidis.*

Psocus morio, *Latr. Coqueb. Ill. Icon.* ii. pl. 2, f. 5. *Burm. Handb. Ent.* ii. 2, 781, 20.

France.

53. Psocus obscurus.

Rufo-fuscus, supra nigricans; antennæ nigræ, hirsutissimæ, alis valde breviores; pedes fuscescentes; alæ subfuscescentes, immaculatæ; stigma postice rotundatum, angulo interno nigro submaculato; areola discalis aperta.

Div. of *P. pilicornis?*

Psocus obscurus, *Ramb. Hist. Nat. Ins. Neur.* 322, 11.

France.

54. Psocus alboguttatus.

Niger, magnitudinis mediæ; abdomen rufescens, segmentorum marginibus albo guttatis; alæ nigræ, maculis discalibus majoribus albis 6 puncto nigro inscriptis, vel subocellatis; intra marginem apicalem puncta 10 minora alba, duplici serie ordinata, alarum venæ nigræ; areola subcentralis petiolata, aperta, libera, vena superiore furcata, inferiore triramosa.

Psocus alboguttatus, *Dalman*, *Analecta Ent.* 98, 14.

Sweden.

55. Psocus vittatus.

Niger vel fuscus; antennæ pallide testaceæ, immaculatæ, breviter pubescentes, alis multo breviores; pedes pallide flavo-testacei, immaculati, tarsis apice infuscatis; alarum anticarum basin et discum occupat vitta latissima nigro-fusca, ad apicem usque producta, relicto margine apicali utrinque albo-hyalino, qui tamen ad stigma costale a ramulo vittæ interruptus; stigma album apice tantum a ramulo illo obscuratum; alæ posticæ dilutius, fuscæ, margine apicali antico albo-hyalino; venæ omnes nigro-fuscæ; areolæ discalis apicalis truncus inferior liber, venas emittens 3, omnes ad costam areola anguli inferioris libera, vena unica arcuata formata.

Psocus vittatus, *Dalman*, *Analecta Ent.* 98, 13. *Zett. Ins. Lapp.* 98, 13.

Sweden.

56. Psocus subfasciatus.

Fuscus; pedes pallidiores; alæ hyalinæ, anticæ maculis subquatuor parvis, fascia media stigmatoque antice posticeque albo tincto, fuscescentibus, areola discali quadrato-oblonga, angulo subobtuso ad marginem interiorem descendente, venarum furcis 2 apicalibus inæqualiter longis. Long. 1; alar. fere 3 lin.

Psocus subfasciatus, *Sundew*, *MSS.* *Zett. Ins. Lapp.* 1052, 3.

Lapland.

57. Psocus obliteratus.

Ferrugineo-fuscus, subnitidus; pedes pallidi; alæ hyalinæ immaculatæ, anticæ stigmate oblongo fumato, areola discali oblongo quadrata incompleta, venarum furcis 2 apicalibus inæqualiter longis. Long. $1\frac{1}{3}$; alar. 3 lin.

Psocus obliteratus, *Zett. Ins. Lapp.* 1052, 4.

Lapland.

58. Psocus subfumipennis.

Testaceus, nitidus; thoracis dorsum fuscum; pedes pallidi; alæ hyalino-cinereæ, anticæ areola discali irregulariter oblongo-quadrata, venis furcatis parallelis, furcis 2 apicalibus subæqualiter longis. Long. $\frac{3}{4}$; alar. $2\frac{1}{2}$ lin.

Psocus subfumipennis, *Zett. Ins. Lapp.* 1053, 5.

Lapland.

59. Psocus boreellus.

Testaceus, nitidus; thoracis dorsum obscurum; pedes pallidi; alæ cinereo-hyalinæ, anticæ areola discali nulla, venis furcatis parallelis, furcis inæqualiter longis, omnibus fuscedine cinctis, furcis 2 apicalibus subæqualiter longis. Long. $\frac{3}{4}$; alar. $2\frac{1}{2}$ lin.

Psocus boreellus, *Zett. Ins. Lapp.* 1053, 6.

Lapland.

60. Psocus striatus.

Testaceus, nitidus; pedes pallidi; alæ cinereo-hyalinæ, anticæ areola discali nulla, venis furcatis subparallelis, furcis æqualiter longis, omnibus fuscedine cinctis. Long. $\frac{3}{4}$; alar. $2\frac{1}{2}$ lin.

Psocus striatus, *Dalm. MSS. Zett. Ins. Lapp.* 1053, 7.

Lapland.

61. Psocus microphthalmus.

Testaceus, gibbus ; thoracis latera et abdomen fusco varia ; tibiæ tarsique fuscescentia ; alæ subfuliginosæ ; stigma album.

Psocus microphthalmus, *Ramb. Hist. Nat. Ins. Neur.* 321, 6.

Nearly the size of *P. longicornis*, pale testaceous. Head large; front very gibbous, without marks or striæ: eyes very small, not prominent: mesothorax very gibbous above: sides of the thorax and abdomen slightly clouded with brown: tibiæ and tarsi brownish: wings very slightly fuliginous, rather darker along the hind borders and at the tips; veins very distinct, mostly yellow, stigma white; discal areolet very large.

Exotic?

Genus 3. ATROPOS.

Tarsi triarticulati. Alæ nullæ.

Atropos, *Leach ; Latr. ; Nitzsch ; Steph.*
Termes, p., *Linn. ; De Geer ; Schæff. ; Wood.*
Pediculus, p., *Geoffr.*
Psocus, p., *Fabr.*
Troctes, *Burm.*
Atropos et Lachesilla, *Westw.*

1. Atropos pulsatorius.

Pallidus ; os rubrum ; oculi lutei ; venter macula fusca.

Atropos pulsatorius, *Steph. Ill. Brit. Ent. Mand.* vi. 128, 1. *Ramb. Hist. Nat. Ins. Neur.* 324.
——— *Allen, Phil. Trans.* 1693. *Derham, Phil. Trans.* 1701. *Stackhouse, Phil. Trans.* 1724.
Termes pulsatorium, *Linn. Syst. Nat.* ii. 1015, 2. *Faun. Suec.* 1937. *Schæff. El. Ent.* pl. 126, f. 1; *Icon.* pl. 269, f. 4, *a*, *b*. *Geoffr. Ins. Par.* ii. 601, 12. *Wood, Ill. Lin. Gen. Ins.* ii. 120, pl. 75.

Termes lignarium, *Deg. Ins.* vii. 41, pl. 4, f. 3.
Hemerobius pulsatorius, *Fabr. Ent. Syst.* ii. 87, 26.
Psocus pulsatorius, *Fabr. Ent. Syst. Suppl.* 204, 10. *Latr. Coqueb. Ill. Icon.* 14, pl. 2, f. 14. *Blanch. Hist. Nat. Ins.* 48, 2.
Atropos lignarius, *Leach, Edin. Encycl.* ix. 139.
Troctes pulsatorius, *Burm. Handb. Ent.* ii. 2, 773, 1.

Europe.

2. Atropos fatidicus.

Ochraceus; os pallidum; abdomen ovatum.

Atropos fatidicus, *Steph. Ill. Brit. Ent. Mand.* vi. 129, 2.
Termes fatidicum, *Linn. Syst. Nat.* ii. 1016; *Faun. Suec.* 1938.
Psocus fatidicus, *Fabr. Syst. Ent.* 204, 11.
Troctes fatidicus, *Burm. Handb. Ent.* ii. 2, 774, 2.

Europe.

Genus 4. CLOTHILLA.

Corpus parvum, apterum. Caput subtriangulare. Thorax capite vix latius. Prothorax brevis. Abdomen ovatum, subconvexum, prothorace mesothorace aut metathorace brevior. Antennæ longæ, gracillimæ, articulis circiter 27; 1us et 2us crassi. Pedes simplices; tarsi 3-articulati.

Clothilla, *Westw. Trans. Ent. Soc. Lond.* iv. 72.

1. Clothilla studiosa.

Luteo-albida; labro pedibusque albidis; oculis, antennis abdominisque incisuris fuscis. Long. 1 lin.

Clothilla studiosa, *Westw. Trans. Ent. Soc. Lond.* iv. 72; *Proc.* 4.

England.

Genus 5. LEPINOTUS.

Ocelli 2, contigui. Tarsorum articulus 1us 2o duplo longior.

Lepinotus, *Von Heyden, Ent. Zeit. Stett.* xi. 84.

Crown with three contiguous ocelli: first joint of the tarsi twice the length of the second: two rudiments of wings.

1. Lepinotus inquilinus.

Obscure fuscus, breviter pubescens; antennis pedibusque flavescentibus; femoribus anticis crassis. Long. $\frac{2}{3}$ lin.

Lepinotus inquilinus, *Von Heyden, Ent. Zeit. Stettin*, xi. 84.

Austria, Tyrol, Hungary.

Fam. 2. TERMITIDES.

Labium fissum. Tarsi 3-4-articulati. Alæ æquales.

Termes, p., *Linn.*
Termitides, *Latr.*
Termitidæ, *Leach; Westw.*
Corrodentia, p. (Termitina et Embidæ), *Burm.*
Termitina (Termitidæ et Embiadæ), *Newman.*

"Imago flies slowly and laboriously, and rids itself of its wings before founding a new colony. Antennæ moderately long, moniliform. Head depressed, received in the prothorax. Eyes hemispherical, small, distant, lateral. Mandibles strong, corneous. Prothorax transverse, fully developed. Wings 4, long, membranous, of equal size and form, decumbent but not deflected when at rest; hind pair not folded. Abdomen with 2 minute caudal papillæ. Tarsi 3- or 4-jointed. Larva and pupa terrestrial, active, hexapod, furnished with powerful mandibles: social, constructive, voracious, omnivorous."—*Newman.*

Genus TERMES.

Tarsi 4-articulati. Alarum venæ discales obsoletæ membranaceæ, recurrentes nullæ.

Termes, *Linn.*, *&c.*
Termitina, *Burm.*; *Hagen*, *Ueber die Lebens weise der Termiten und ihre Verbreitung.*
Termitidæ, *Newman.*

Rambur divides Termes into the two following groups:—

a. Costal space traversed by oblique veins.

T. flavicollis, ochraceus, pallidus, quadricollis, obesus.

a a. Costal space without veins.

T. lucifugus, morio, Mauricianus, costatus, grandis, angustatus, subhyalinus, dirus, nigricans, Rippertii, trinervius, dubius, cephalotes.

1. Termes flavicollis.

Fuscus; ore, antennis, prothorace pedibusque testaceis; alis in medio purpureo, lateribus æneo-micantibus.

Termes flavicollis, *Fabr. Ent. Syst.* ii. 91, 6. *Descript. de l'Egypte, Neur.* pl. 2, f. 12. *Burm. Handb. Ent.* ii. 764, 1. *Ramb. Hist. Nat. Ins. Neur.* 302, 1.

T. flavicollis ?—Testaceous, sublinear, smooth, shining, thinly pubescent, paler beneath: head elliptical, flat above, very little broader than the thorax: ocelli 2, one on each side, close to the eye: palpi short, straw-colour: antennæ straw-colour, 16-jointed, nearly as long as the head: prothorax nearly twice broader than long, slightly concave in front, slightly convex on each side, straight behind: abdomen widening from the base to the tip, a little broader but hardly longer than the thorax: legs straw-colour; fourth joint of the tarsi as long as all the other joints: wings quite colourless and transparent, more than twice the length of the body; costal and subcostal veins testaceous; the other veins obsolete. Length of the body 2¼ lines; of the wings 10 lines.

a—b. ——— ? From Mr. Children's collection.

T. flavicollis? Larva?—Straw-colour, smooth, bare, shining, sublinear: head short-elliptical, a little broader than the thorax: eyes none: ocelli 2, one on each side between the antennæ: mandibles small, with black tips: palpi short: antennæ with not more than 16 joints, hardly more than half the length of the head: prothorax more than twice broader than long, slightly impressed in front and behind, almost straight on each side, with an indistinct longitudinal furrow: abdomen rounded towards the tip, longer than the thorax: legs short; fourth joint of the tarsi twice the length of all the other joints. Length of the body 1½ line.

a. Marseilles.

T. flavicollis? Soldier.—Ferruginous, tawny or piceous, pubescent, shining: head almost oval, very much broader than the rest of the body, and nearly as long, impressed in front, with two sutures beneath: clypeus narrow, conical: eyes and ocelli none: palpi short: antennæ shorter than the head; first and second joints short; third rather long; the following successively decreasing in length: prothorax more than twice broader than long, impressed before and behind, convex on each side, with a slight longitudinal suture: mesothorax much shorter than the prothorax: metathorax much shorter than the mesothorax: abdomen a little longer and broader than the thorax: legs long; fourth joint of the tarsi more than twice the length of all the other joints.

a. ——— ?

T. fatalis? Labourer.—Testaceous, slender, linear, pubescent, shining: head cylindrical, tawny and impressed in front, with the mandibles nearly as long as the rest of the body, with two furrows beneath: eyes and ocelli none: palpi testaceous, small: mandibles black, stout, curved, acute, toothed near the base: prothorax subquadrate, broader than long, deeply indented on the fore border: abdomen not longer than the thorax: legs short, stout; fourth joint of the tarsi twice the length of all the other joints; claws long, thick. Length of the body 2½ lines.

a. ——— ? From Mr. Children's collection.

Var.? Like the last, but with the sides of the thorax angular: sides of the prothorax straight, angular in front. Length of the body 4—6 lines.

a. Tripoli.
b—e. ——— ?

T. flavicollis ? Piceous, rather flat, very thinly pubescent, sublinear: head oval, very much longer than broad, tawny in front and with a convex protuberance of that colour between the eyes, nearly as broad as the thorax: ocelli two, small, one on each side at some little distance from the eye: mandibles small, acute, black towards the tips: antennæ tawny, as long as the head, with not less than twenty joints: prothorax scutcheon-shaped; fore border nearly straight, indented in the middle; hind border convex, much narrower: mesothorax and metathorax with the basal parts of wings: abdomen fusiform, with nine segments of nearly equal size, longer than the thorax: legs tawny; fourth joint of the tarsi longer than all the preceding joints. Length of the body $4\frac{1}{2}$ lines.

a. West Coast of Africa. From Mr. Fraser's collection.

2. Termes pallidus.

Flavo-rufus, T. flavicolli *similis*, *minor; antennis pedibusque pallidis; femoribus crassis; alis albis, venis costalibus rufis.*

Termes pallidus, *Ramb. Hist. Nat. Ins. Neur.* 303, 3.

Smaller than *T. flavicollis*, entirely yellowish red: prothorax almost like that of *T. flavicollis:* feelers and legs pale; thighs very short and thick: wings white, slightly rugose; the two costal veins red; costal space traversed by 4—5 veinlets; secondary veins moderately numerous and distinct; first of the two longitudinal veins bent after its middle to the second costal vein which it joins.

Isle of France.

T. pallidus ?—Tawny, almost bare, testaceous beneath: head elliptical, longer than broad, as broad as the thorax, testaceous in front, with a very slight furrow on the disk: ocelli none: mandibles short, broad, black towards the tips, with two teeth: antennæ pubescent, with more than fifteen joints, not longer than the head? joints increasing in length towards the tips: prothorax twice broader than long, slightly concave in front and equally convex behind; sides somewhat rounded: abdomen subelliptical, shorter and a little broader than the thorax: legs testaceous, pubescent; fourth joint of the tarsi twice the length of all the preceding joints: wings dingy white, slightly rugulose and opaque, very much longer than

the body; veins along the costa tawny; subcostal space slightly tawny, with six or more very oblique transverse veins; space between the subcostal vein and the discal vein rather closely and irregularly reticulated; discal vein emitting about ten secondary veins, some of which are forked, and the spaces between them are more or less reticulated. Length of the body 4 lines; of the wings 14 lines.

a. ——— ?

3. Termes lucifugus.

Fuscus; ore, antennis pedibusque pallidis; alis purpureo-micantibus. Long. 2½; alar. 4 lin.

Termes lucifugus, *Rossi, Faun. Etrusc. Mant.* i. p. 107, pl. 5, f. k. *Latr. Gen. Cr. et Ins.* iii. 206, 1. *Blanch. Hist. Ins.* 47, 4. *Burm. Handb. Ent.* ii. 764, 2. *Guér. Icon. Règne Anim. Ins.* pl. 63, f. 3. *Ramb. Hist. Nat. Ins. Neur.* 204, 6.

South Europe.

T. lucifugus ?—Piceous, partly testaceous, linear, bare, shining, rather broad: head subelliptical, rather flattened on the disk, as broad as the thorax: prothorax full twice broader than long; sides nearly straight: abdomen subfusiform, longer and a little broader than the thorax: legs testaceous; fourth joint of the tarsi much longer than all the others; wings removed. Length of the body 2 lines.

a. Marseilles.

T. lucifugus ?—Tawny; underside, head in front, antennæ, palpi and legs testaceous: ocelli two, one on each side very near the eye: abdomen slightly widening from the base to the tip: wings removed. Length of the body 1½ line.

a. ——— ? From Mr. Children's collection.

Piceous, narrower than the first: head in front, antennæ, tibiæ and tarsi tawny: abdomen not broader than the thorax: wings removed. Length of the body 1¾ line.

a, *b*. ——— ?

4. Termes castaneus.

Flavo-castaneus ; fronte retusa ; alæ costis marginalibus tribus corneis. Long. 3 ; alar. 5 lin.

Termes castaneus, *Burm. Handb. Ent.* ii. 2, 764, 3.

California and Porto Rico.

T. Californiæ ?—Pale ferruginous, sublinear, bare, shining, tawny beneath: head elliptical, flat above, with an impression between the eyes and another between the antennæ, testaceous in front, a little broader than the thorax, with a black spot on each side in front of the base of the antenna: ocelli none: clypeus rather long: antennæ with about twenty-seven joints, a little longer than the head: prothorax nearly twice broader than long, with a slight longitudinal furrow, convex on each side and behind, slightly concave in front: abdomen subfusiform, a little broader but not longer than the thorax, with two short quadriarticulate pubescent appendages at the tip: legs tawny; tibiæ with a few short spines; fourth joint of the tarsi twice the length of all the other joints: wings pale brown, full twice the length of the body, thickly reticulated with veinlets which mostly form irregular quadrilateral areolets; six very oblique transverse veins along the fore border, the four last connected by transverse veinlets. Length of the body 4½ lines; of the wings 20 lines.

a—d. California. From M. Hartweg's collection.

5. Termes nasutus.

Fuscus ; ore, antennis, pedibus ventreque flavo-rufis ; fronte cornuta. Long. 3 ; alar. 5 lin.

Phryganea nasuta, *Deg. Ins.* iii. 367, pl. 27, f. 6, 7.
Hemerobius marginatus, *Linn. Syst. Nat.* ii. 912, 9.
Termes monoceros, *König, Berl. Schrift.* iv. pl. 1. *Perty, Delect. Anim. Artic.* 127, pl. 25, f. 10.
Termes nasutus, *Burm. Handb. Ent.* ii, 2, 764, 4.

Surinam.

T. nasutus ?—Piceous, sublinear, pubescent, shining, testaceous beneath: head nearly elliptical, depressed above, testaceous towards the mouth, full as broad as the thorax: ocelli two, one on each side, at some distance from the eye: antennæ tawny, a little longer than the head: prothorax twice broader than long, slightly concave in front, almost straight behind, convex on each side: abdomen subfusiform, luteous beneath, a little broader but hardly longer than the thorax: legs testaceous; fourth joint of the tarsi much longer than all the other joints: wings grayish brown, full twice the length of the body; veins brown; transverse veins before and behind the subcostal vein indistinct; discal longitudinal veins with about twelve distinct secondary veins. Length of the body 3 lines; of the wings 12 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.
b. Pará. From Mr. Stevens' collection.

6. Termes ochraceus.

Totus testaceus; alæ subcinereæ, areolis reticulatis, costa marginali necnon venarum prima cum ramis omnibus corneis. Long. 4; alar. 9 lin.

Termes ochraceus, *Burm. Handb. Ent.* ii. 2, 765, 5. *Descript. de l'Egypte*, *Neur.* pl. 2, f. 11. *Ramb. Hist. Nat. Ins. Neur.* 303, 2.

Egypt.

T. ochraceus ?—Pale luteous, shining, pubescent, nearly linear, testaceous beneath: head nearly elliptical, hardly depressed above, as broad as the thorax: ocelli two, one on each side close to the eye: mandibles mostly black: antennæ pale testaceous, longer than the head: prothorax very much broader than long; fore border hardly concave; sides and hind border hardly convex: abdomen slightly increasing in breadth towards the tip, a little broader but not longer than the thorax: legs pale testaceous: wings slightly testaceous, nearly twice the length of the body, a little opaque and rugulose: veins pale; transverse veins between the costa and the subcosta distinct. Length of the body 2 lines; of the wings 8 lines.

a, *b*. ———? From Mr. Children's collection.

7. Termes viator.

Fuscus ; ore, antennis, pedibusque dilutioribus ; fronte bipunctata ; ocellis nullis ; alarum costis 3-4 *marginalibus corneis.* Long. 6 lin.

Termes capensis, *Deg.* vii. 24, pl. 38, f. 1—4.
Termes viator, *Latr. Nouv. Dict. d'Hist. Nat.* xxii. 49 ; *Hist. Nat. Cr. et Ins.* xiii. 51. *Fabr. Ent. Syst.* ii. 91, 6, *annot. Burm. Handb. Ent.* ii. 2, 765, 6.
Termes viarum, *König, Berl. Schrift.* vi. pl. 1.

Cape.

Female, Queen.—Head and thorax ferruginous: abdomen whitish. Length of the body 42 lines; breadth of the body 18 lines: length of the head 1 line; of the thorax 2 lines.

a. (In spirits). Cape Coast Castle. Presented by — Williams, Esq.

Soldier.—Testaceous, pubescent, shining: head subelliptical, broader and longer than the thorax, rather flat above, with a black spot on each side by the base of the clypeus: eyes small: ocelli none: antennæ with twenty-seven or more short joints, shorter than the head: prothorax nearly twice broader than long, narrower behind, with a tranverse furrow, in front of which it is slightly elevated and applied to the head; fore border nearly straight: abdomen as long as the thorax, with a very short filament on each side at the tip: legs long; fourth joint of the tarsi a little longer than all the other joints. Length of the body 6 lines.

a. South Africa. From Mr. Pearson's collection.

Labourer.—Pale brown, testaceous beneath: head short elliptical, piceous, very much broader than the thorax, with a testaceous dot on each side between the eyes: clypeus testaceous along the fore border: eyes small: ocelli none: mandibles short, triangular, armed with short obtuse teeth: palpi testaceous; tips pale brown: antennæ pale brown, testaceous at the base, shorter than the head: hind borders of the segments of the thorax and of the abdomen and legs testaceous. Length of the body 5 lines.

a. South Africa. From Mr. Pearson's collection.

T. viator ? — Piceous, linear, shining, bare, tawny beneath: head subelliptical, depressed between the eyes, tawny in front, hardly broader than the thorax: ocelli two, one on each side, very near the eye: antennæ tawny: prothorax full twice longer than broad, concave in front, convex on each side and behind where it is slightly impressed: abdomen hardly broader or longer than the thorax: legs tawny; fourth joint a little longer than all the other joints: wings dingy whitish, slightly fawn-coloured along the fore border, full twice the length of the body; costal and subcostal veins tawny, space behind the latter indistinctly and irregularly reticulated with veinlets, some of these also occur in front of the discal longitudinal vein; the other veins almost colourless. Length of the body 4—6 lines; of the wings 20—36 lines.

a, *b*. Port Natal. From Dr. Krauss' collection.
c—n. ——— ?

8. Termes fatalis.

Fuscus; ore, antennis, pedibus, macula prothoracis media dorsoque testaceis; fronte subprominula; alis fuscescentibus. Long. 7; alar. 18 lin.

Termes fatalis, *Fabr. Ent. Syst.* ii. 87, 1. *Burm. Handb. Ent.* ii. 2, 765, 7.
Termes bellicosus, *Smeathman*, *Phil. Trans.* lxxi.

Sierra Leone.

T. fatalis ?—Piceous, smooth, shining, bare, sublinear: head elliptical, ferruginous, paler in front and beneath, a little shorter than the rest of the body, with a porrect horizontal horn in front: eyes very small, in a cavity on each side in front: ocelli none: mandibles long, curved, acute, unidentate, piceous except at the base: palpi and antennæ tawny: prothorax nearly semicircular, more than twice longer than broad; fore border straight, forming an acute angle on each side, and with two porrect horizontal acute horns in the middle: mesothorax and metathorax very short, angular on each side: abdomen with nine short equal segments: legs tawny, rather slender; fourth joint of the tarsi longer than all the preceding joints. Length of the body 2 lines.

a, Sierra Leone. Presented by the Rev. D. F. Morgan.

T. fatalis? Female.—Ferruginous, pubescent: head a little longer than broad, as broad as the thorax, tawny in front and beneath: ocelli two, one on each side between the eyes, but at some distance from them: mandibles broad, short, black towards the tips: antennæ 19-jointed, nearly as long as the head; joints of equal length: prothorax obconical: abdomen linear, much longer than the thorax, tawny beneath: legs tawny; fourth joint of the tarsi longer than the three preceding joints: wings brown, nearly twice the length of the body; no transverse subcostal veins; discal longitudinal vein emitting about twelve secondary veins. Length of the body 4½ lines; of the wings 18 lines.

a. Gambia.

T. fatalis? Labourer ?—Ferruginous, pubescent, sublinear, tawny beneath: head nearly twice longer than broad, tawny in front, depressed on the disk, with a convex protuberance between the antennæ, as broad as the thorax: ocelli two, one on each side, very near the eye: mandibles black towards the tips: antennæ tawny, mutilated, longer than the head? prothorax scutcheon-shaped; fore border nearly straight, indented in the middle; hind border convex, much narrower: mesothorax and metathorax with the basal parts of wings: abdomen with nine segments of nearly equal size, a little longer than the thorax: legs tawny. Length of the body 5 lines.

a. Congo. Presented by Sir. John Richardson.

9. Termes dirus.

Fuscus; ore, puncto frontali, antennis, pedibus pectoreque ferrugineis; alæ fuscescentes, costis duabus marginalibus corneis. Long. 7; alar. 18 lin.

Termes dirus, *Klug. Burm. Handb. Ent.* ii. 2, 766, 8. *Ramb. Hist. Nat. Ins. Neur.* 307, 13.
Termes flavicollis, *Perty, Delect. Anim. Artic. Bras.* 128, pl. 26, f. 11.
Termes obscurum, *Blanch. Hist. Ins.* pl. 47, f. 1.

Brazil.

T. dirus.—Pale ferruginous, sublinear, bare, shining: head elliptical, concave between the eyes, a little narrower than the thorax: ocelli none: antennæ tawny, very much longer than the head, with about twenty-two joints: prothorax more than twice broader than long, almost transversely semi-elliptical, nearly straight in front, convex on each side and behind: mesothorax and metathorax scutcheon-shaped: abdomen piceous, subfusiform, longer than the thorax: fourth joint of the tarsi more than twice the length of all the other joints: wings dark brown, piceous along the fore border, about twice the length of the body; transverse oblique veins behind the subcostal vein, and secondary veins towards the hind border indistinct Length of the body 9 lines; of the wings 32 lines.

a. Interior of Brazil. Presented by the Entomological Club.
b. Pará. Presented by Reginald Graham, Esq.
c. Pará. Presented by J. P. G. Smith, Esq.
d. Brazil. From Mr. Stevens' collection.
e. ——— ? From Mr. Children's collection.
f. ——— ?

T. dirus.—Testaceous, convex, smooth, shining, pubescent: head twice the breadth of the thorax, very thick, narrower and impressed in front: eyes and ocelli none: mandibles piceous, tawny at the base, strong, curved, edged, acute, with a stout tooth near the base: palpi long: antennæ 19-jointed, longer than the head: prothorax, mesothorax and metathorax severally with a strong acute spine projecting from each side: prothorax more than twice broader than long, vertical in front and applied closely to the head, straight behind: abdomen fusiform, nearly twice the length of the thorax, with ten segments of equal size: legs long; fourth joint of the tarsi more than twice the length of all the other joints. Length of the body 3—7 lines.

a, b. Demerara. Presented by Mr. Bowerbank.
c, d. ——— ? From Mr. Children's collection.

Var. *β.* Head a little narrower.

a, b. Brazil. From Mr. Mornay's collection.
c, d. ——— ?

Var. γ. Head narrower than in var. *a*, spines of the thorax shorter.

a. British Guiana. Presented by Sir. R. Schomburgk.

Var. δ. Smaller: head much narrower, with shorter and black mandibles: spines of the thorax short.

a, *b*. Demerara. Presented by Mr. Bowerbank.

Var.? Head much smaller, with a yellow dot on the disk: mandibles small, concealed beneath the clypeus: antennæ as long as two-thirds of the body.

a. Pará. Presented by Reginald Graham, Esq.

Var.? Like the last, but smaller: head narrower: spines of the thorax rudimentary.

a. Rio Janeiro. Presented by J. P. G. Smith, Esq.

Var.? Tawny, pubescent: head narrower in front, twice the length and breadth of the thorax: eyes and ocelli none: mandibles black, long, curved, acute, not dentated: palpi long, testaceous: antennæ more than half the length of the body, 20-jointed; tips of the joints whitish; joints from the second to the fifth short; the rest rather long: spines of the thorax short, obtuse: abdomen subfusiform, broader than the thorax and nearly twice its length.

a. Rio Janeiro. Presented by J. P. G. Smith, Esq.

Var.? Immature. Testaceous, soft: head short-elliptical, piceous on the disk, full twice the breadth of the thorax: antennæ shorter than the head: thorax without spines: fore border of the prothorax with two lobes: abdomen linear, longer than the thorax. Length of the body 2 lines.

a—*d*. Pará. Presented by J. P. G. Smith, Esq.

T. dirus? Worker? — Tawny, sublinear, pubescent, shining, rather flat: head nearly elliptical, broader and shorter than the thorax: ocelli two, one on each side, near the base of the antenna, far from the eye: mandibles mostly black, each armed with two strong teeth: antennæ shorter than the head: prothorax, mesothorax and metathorax nearly equal in size and shape: abdomen a

little longer but hardly broader than the thorax: fourth joint of the tarsi nearly twice the length of all the other joints. Length of the body 5 lines.

a. ——— ?

10. Termes molestus.

Fuscus; antennis, ore, pedibus corporeque subtus testaceis; fronte puncto impresso ferrugineo; alis pellucidis, costa e vena duplici cornea confecta, fusca. Long. $5\frac{1}{2}$; alar. 12 lin.

Termes fatale, *Perty, Del. Anim. Artic. Braz.* 127, pl. 25, f. 8.
Termes cumulans? *Kollar, Brasiliens Vorzüglich lästige Insecten*, 13, f. 9.
Termes molestus, *Klug, MSS. Burm. Handb. Ent.* ii. 2, 766, 9.
Brazil.

11. Termes testaceus.

Fuscus; antennis, ore, pedibus corporeque subtus testaceis; fronte immaculata; alis fuscis, costa cornea bivenosa. Long. 3; alar. 6 lin.

Hemerobius testaceus, *Linn. Syst. Nat.* i. 2, 912, 8.
Perla fusca, *Deg. Ins.* iii. 367. pl. 27, f. 4, 5.
Termes destructor, *Fabr. Ent. Syst.* ii. 89. *Perty, Del. Anim. Artic. Braz.* 127, pl. 25, f. 9.
Termes destructor? *Illiger, Mag.* iv. 227, 2.
Termes testaceus, *Burm. Handb. Ent.* ii. 2, 767, 10.
Brazil.

T. destructor?—Tawny, pubescent, shining, linear: head piceous, subelliptical, very much longer than broad, depressed in the disk, tawny in front and beneath, nearly as broad as the thorax: ocelli two, one on each side, near the eye: mandibles small, piceous towards the tips: antennæ testaceous, 15-jointed, as long as the head: prothorax twice broader than long, slightly excavated above, straight in front, convex on each side and behind: abdomen testaceous beneath, a little longer than the thorax: legs testaceous; fourth joint of the tarsi much longer than all the other joints: wings gray, fawn-colour on the fore border, full twice the length of

the body; veins tawny; no subcostal transverse veins; longitudinal vein behind the subcostal emitting two branches at two-thirds of its length; discal longitudinal vein emitting about twelve distinct, very oblique, secondary veins. Length of the body 3 lines; of the wings 12 lines.

a, *b*. Honduras, From Mr. Miller's collection.
c. ——— ?

T. destructor ? Soldier.—Tawny, convex, shining, pubescent: head ferruginous, globose, bare, more than twice the breadth of the thorax, tawny beneath, front part produced into a long, porrect, horizontal, acute horn: eyes and ocelli indistinct, or none: palpi and antennæ testaceous: thorax short: abdomen fusiform, much broader and longer than the thorax: legs testaceous, long, slender. Length of the body 1 line.

a. ———? From Mr. Children's collection.

12. Termes morio.

Niger; antennis, ore, pedibus ventreque testaceis; alis nigris, opacis. Long. $2\frac{1}{2}$: alar. $5\frac{1}{4}$ lin.

Termes morio, *Fabr. Ent. Syst.* ii. 90, 3. *Burm. Handb. Ent.* ii. 2, 767, 11. *Ramb. Hist. Nat. Ins. Neur.* 305, 7.

Cayenne; Porto Rico.

T. Morio ?—Piceous, pubescent, linear, hardly shining, testaceous beneath: head nearly oval, slightly produced and narrower in front, depressed on the disk, tawny towards the mouth, full as broad as the thorax: ocelli two, one on each side near the front of the eye: mandibles with black tips: antennæ testaceous, longer than the head: prothorax nearly twice longer than broad, slightly concave in front, more convex behind, slightly convex and sinuated on each side; a transverse furrow near the fore border, and a longitudinal furrow on the disk: abdomen as broad as the thorax and very much longer; sides and hind borders of the segments testaceous: legs testaceous, slender; fourth joint of the tarsi as long as all the preceding joints: wings gray; veins brown; no transverse veins between the costal and subcostal veins; some very indistinct transverse veins between the latter and the next longitudinal vein, which

emits one or two branches; discal longitudinal vein emitting six secondary veins, three of which are forked. Length of the body $2\frac{1}{2}$ lines; of the wings 10 lines.

a, *b*. Columbia. From Dr. Cuming's collection.

13. Termes lividus.

Pallide testaceus; abdomine supra fusco; alis cinereo-fuscis, costa marginali duplici, in apice summo triplici pallida. Long. $2\frac{3}{4}$; alar. 6 lin.

Termes lividus, *Burm. Handb. Ent.* ii. 2, 767, 12.

St. Domingo.

14. Termes cingulatus.

Fuscus; ore, antennis, pedibus pectoreque testaceis; abdominis segmentis pallide marginatis; alis infumatis subnitidis, venis omnibus fuscis. Long. 4; alar. 9 lin.

Termes cingulatus, *Klug, MSS. Burm. Handb. Ent.* ii. 2, 767, 13.

South Brazil.

15. Termes flavipes.

Fuscus; ore, tibiis tarsisque pallidis; alis hyalinis, costa marginali duplici fusca, venis discalibus reticulatis. Long. 2; alar. 3 lin.

Hemerobius marginalis, *Rossi, Faun. Etrusc. Ed. Hellw.* ii. 16, 688.

Termes flavipes, *Kollar, MSS. Burm. Handb. Ent.* ii. 2, 768, 14.

South Europe.

16. Termes quadricollis?

Ferrugineus, subtus fulvus, capitis discus piceus; antennæ fulvæ; abdomen thorace latius; pedes fulvi; alæ subfuscescentes.

Termes quadricollis, *Ramb. Hist. Nat. Ins. Neur.* 304, 4.

Ferruginous, pubescent, tawny beneath: head elliptical, longer than broad, a little narrower than the thorax, piceous on the disk, tawny in front: ocelli two, one on each side, between the eyes and close to them: mandibles short, broad: antennæ tawny, mutilated, with less than twenty joints, not longer than the head; joints of equal length: prothorax twice broader than long, slightly concave in front and equally convex behind; sides somewhat rounded: abdomen increasing in breadth from the base to near the tip, broader but not longer than the thorax: legs tawny; fourth joint of the tarsi twice the length of all the preceding joints: wings brownish, slightly opaque and rugulose, brown along the costa, nearly twice the length of the body, indistinctly reticulated; five or six transverse oblique veins in the subcostal space; the other veins pale; secondary veins numerous but indistinct. Length of the body $2\frac{1}{2}$ lines; of the wings 9 lines.

a. ——— ? From Mr. Children's collection.

17. Termes obesus.

Piceus; pedes fulvi; alæ sordide albidi.

Termes obesus, *Ramb. Hist. Nat. Ins. Neur.* 305, 5.

Bombay.

T. obesus?—Piceous, sublinear, shining, pubescent: head subelliptical, flat between the eyes, very little broader than the thorax: ocelli two, one on each side, near the eye: antennæ a little longer than the head: prothorax twice longer than broad, convex on each side and behind, hardly concave in front: abdomen a little shorter than the thorax: legs tawny; fourth joint of the tarsi twice the length of all the other joints: wings dingy whitish; veins fawn-colour; no distinct transverse subcostal veins; discal longitudinal vein with distinct secondary veins. Length of the body $4\frac{1}{2}$ lines; of the wings 24 lines.

a. North India. From Mr. L. James's collection.
b, c. ——— ?

T. obesus?—Piceous, sublinear, pubescent, shining, tawny beneath: head tawny in front: ocelli two, one on each side, at some

distance from the eye: mandibles small, with black tips: palpi testaceous: antennæ tawny, 20-jointed, as long as the head: prothorax more than twice broader than long, almost straight in front and behind, convex on each side: abdomen twice the length of the thorax: legs tawny; fourth joint of the tarsi twice the length of all the other joints: wings removed. Length of the body 5 lines.

a. Madras. Presented by Walter Elliot, Esq.

18. Termes Mauricianus.

Rufo-fuscus; prothorax sat magnus; abdomen latum; pedes flavi, tibiis tarsisque gracilibus; alæ latæ, ad costam rufescentes.

Termes Mauricianus, *Ramb. Hist. Nat. Ins. Neur.* 305, 8.

"Size of *T. flavicollis* or a little larger, dull reddish brown, slightly pubescent: head brown, reddish in front: antennæ reddish, a little bristly; joints short: prothorax rather large, dull red, a little narrower behind, where it is rounded and rather strongly notched, a little notched in front: abdomen broad, flat, reddish brown above, reddish beneath: legs yellow; tibiæ and tarsi slender: wings large, a little broader than those of *T. flavicollis;* fore border reddish; veins slightly pubescent; secondary veins moderately distinct; second costal vein emitting some recurrent branches which spread on the disk towards the base; spaces between them microscopically reticulated; costal space without veins."

Isle of France.

T. Mauricianus ?—Piceous, pubescent, shining, sublinear, testaceous beneath: head nearly elliptical, rather broad, tawny in front of the eyes, a little broader than the thorax: ocelli two, one on each side, at some distance from the eye: mandibles with black tips: antennæ tawny, not longer than the head: thorax mostly testaceous: abdomen subfusiform, longer and a little broader than the thorax: legs testaceous; fourth joint of the tarsi twice the length of all the other joints: wings gray, with a luteous tinge along the fore border, full twice the length of the body, slightly opaque and rugulose; some transverse veins between the costal and subcostal veins; space behind the subcostal vein towards the tip slightly reticulated with veinlets; secondary veins proceding from

the discal longitudinal vein, and the branches of the longitudinal vein distinct. Length of the body 3½ lines; of the wings 18 lines.

a. East Indies. From Archdeacon Clerk's collection.

19. Termes costatus.

Ferrugineo-flavus; caput ovatum, gutta pallida; prothorax fere semicircularis, capite latius; abdomen supra nigricans, fasciis flavis; alæ subrufescentes, marginibus obscurioribus.

Termes costatus, *Ramb. Hist. Nat. Ins. Neur.* 305, 9.

"Ferruginous-yellow: head oval, moderately large; front rather obscure, with a pale dot: ocelli two: antennæ with the third joint longer than the following joints; fourth shortest; the rest successively increasing in length: maxillary palpi long: first joint of labial palpi very short, last joint longer than the preceding one: prothorax almost semicircular, broader than the head, depressed on each side, slightly notched behind; anterior angles prominent: abdomen blackish above; hind borders of segments yellow: wings pale reddish, darker along the hind border especially towards the base, blackish in front, where the two veins are not ramified; the other veins numerous and distinct; no perceptible reticulation, but some irregular and indistinct veinlets."

Cayenne.

T. costatus?—Piceous, pubescent, nearly linear, tawny beneath: head subelliptical, depressed above, with a red dot between the eyes, tawny in front, hardly broader than the thorax: ocelli two, one on each side, far from the eye: antennæ tawny, longer than the head: prothorax nearly twice broader than long, straight in front, convex on each side and behind, forming two-thirds of a circle: abdomen not longer than the thorax: legs tawny; fourth joint of the tarsi twice the length of all the other joints: wings nearly hyaline, full twice the length of the body, tawny along the fore border; costal and subcostal veins ferruginous; the other veins indistinct. Length of the body 7 lines: of the wings 32 lines.

a, *b*. British Guiana. Presented by Sir. R. Schomburgk.

20. Termes grandis.

Termes grandis, *Ramb. Hist. Nat. Ins. Neur.* 306, 10.
T. fatalis?

Senegal.

21. Termes angustatus.

Termes angustatus, *Ramb. Hist. Nat. Ins. Neur.* 306, 11.
T. viator?

Cape.

22. Termes subhyalinus.

Termes subhyalinus, *Ramb. Hist. Nat. Ins. Neur.* 307, 12.
T. fatalis?

Senegal.

T. subhyalinus? Soldier.—Testaceous, smooth, shining, pubescent: head bare, linear, luteous, ferruginous in front, much broader and thicker than the rest of the body and nearly as long, excavated in front, with two porrect, horizontal, acute horns on the fore border: eyes small: ocelli two, one on each side, close to the eye: mandibles long, slender, black, curved, acute, unidentate, more than half the length of the head: palpi long, testaceous: antennæ testaceous, shorter than the head: thorax very short: abdomen about four times the length of the thorax; segments short and of equal size: legs testaceous, rather long and slender; fourth joint of the tarsi twice the length of all the preceding joints. Length of the body $2\frac{1}{2}$ lines.

a, *b*. Sierra Leone. Presented by the Rev. D. F. Morgan.

23. Termes nigricans.

Termes nigricans, *Ramb. Hist. Nat. Ins. Neur.* 308, 14.

Brazil.

24. Termes Rippertii.

Ferrugineus; caput piceum, antice fulvum; antennæ luteæ; abdominis segmenta testaceo marginata; pedes lutei; alæ subcinereæ, costa fusca apice lutea.

Termes Rippertii, *Ramb. Hist. Nat. Ins. Neur.* 308, 15.

Havanah.

Ferruginous, shining, pubescent, nearly linear, luteous beneath: head short-elliptical, piceous, longer than broad, tawny in front, hardly narrower than the thorax: ocelli two, one on each side, close to the eye: antennæ luteous, 15-jointed, a little longer than the head; joints of equal length: prothorax much broader than long, slightly concave in front, convex along the hind border, very convex on each side: abdomen longer and a little broader than the thorax; hind borders of the segments testaceous: legs luteous; fourth joint of the tarsi longer than all the rest together: wings pale gray, slightly opaque; fore border brown, luteous towards the tip; subcostal space with numerous oblique, indistinct, transverse veins; longitudinal vein behind them emitting two branches; discal longitudinal vein emitting nine oblique secondary veins. Length of the body 3 lines; of the wings 16 lines.

a—*d*. Jamaica. From Mr. Gosse's collection.

25. Termes trinervius.

Termes trinervius, *Ramb. Hist. Nat. Ins. Neur.* 308, 16.

Senegal.

T. trinervius? *Ferrugineus; corpore subtus, prothorace, abdominis segmentorum marginibus pedibusque luteis; antennæ testaceæ; alæ cinereæ, ad costam luteæ.*

Ferruginous, shining, pubescent, linear, luteous beneath: head subelliptical, piceous, very much longer than broad, luteous in front, hardly narrower than the thorax: ocelli two, one on each side, close to the eye: mandibles acute, bidentate, black towards the tips: antennæ testaceous, not longer than the head: prothorax luteous,

twice broader than long, slightly concave along the fore border, convex on each side and behind: abdomen very much longer than the thorax; hind borders of the segments luteous: legs luteous; fourth joint of the tarsi longer than all the preceding joints: wings gray, slightly opaque, luteous along the fore borders; subcostal space with about ten oblique transverse veins; longitudinal vein behind them emitting near its tip three branches, one of which is forked; discal longitudinal vein emitting twelve distinct oblique secondary veins. Length of the body $3\frac{1}{2}$ lines; of the wings 18 lines.

a. Tripoli.

26. Termes dubius.

Rufo-ferrugineus; caput maximum, latum, subquadratum; palpi maxillares mandibulis vix breviores; thorax utrinque trispinosus; abdomen rufo-flavum, pubescens.

Termes dubius, *Ramb. Hist. Nat. Ins. Neur.* 309, 17.
Termes dirus?

Brazil.

27. Termes cephalotes.

Flavus, ferrugineo varius; caput ferrugineum, subquadratum, depressum, thoracis abdominisque longitudine; mandibulæ nigræ non dentatæ; labrum longissimum; antennarum articulus 2us reliquis brevior; abdomen ovatum, flavum, disco obscuriore; pedes pallide flavi.

Termes cephalotes, *Ramb. Hist. Nat. Ins. Neur.* 309, 18.
Termes dirus?

Brazil.

28. Termes insularis.

Fulvus, nitens; pedes pallidiores; alæ limpidæ.

Termes insularis, *White, Zool. Erebus and Terror*, fig. 11.

Tawny, bare, shining, linear, paler beneath: head elliptical, flat above, a little narrower than the thorax: ocelli two, one on

each side, close to the eye: mandibles mostly black: antennæ hardly so long as the head: prothorax twice broader than long, slightly concave in front, slightly sinuated on the hind border, convex on each side: abdomen nearly linear, fully as long and as broad as the thorax: legs pale tawny; fourth joint of the tarsi longer than all the other joints: wings whitish, transparent, nearly twice the length of the body; veins along the fore border tawny; transverse subcostal veins distinct; the other veins colourless but distinct; space between the subcostal vein and the discal vein slightly reticulated; the usual number of secondary veins, those at the base testaceous. Length of the body $3\frac{1}{2}$ lines; of the wings 19 lines.

a, *b*. New Zealand. Presented by Dr. Sinclair.

29. Termes Taprobanes.

Ferrugineus, subtus fulvus; caput antice fulvum, thorace vix latius; pedes fulvi; alæ subcinereæ, ad costam cervinæ.

Ferruginous, sublinear, shining, very pubescent, tawny beneath: head subelliptical, flat between the eyes, tawny in front, hardly broader than the thorax: ocelli rather large, one on each side, near the eye: mandibles with black tips: antennæ ferruginous, tawny at the base, a little longer than the head, with not more than twenty joints: prothorax twice broader than long, convex on each side and behind, slightly concave in front: abdomen sublinear, hardly broader or longer than the thorax: legs tawny; fourth joint of the tarsi twice longer than all the other joints: wings grayish, much more than twice the length of the body; veins and fore border fawn-colour; transverse subcostal veins most distinct towards the tips of the wings; discal longitudinal vein with very distinct transverse secondary veins. Length of the body 5 lines; of the wings 12 lines.

a—*c*. Ceylon. From Mr. Cuming's collection.
d. East Indies. From Archdeacon Clerk's collection.

Female, Queen.—Head wanting: thorax piceous, pubescent, shining, partly ferruginous: prothorax small, full twice broader than long, narrower behind; fore border almost straight; sides and hind border convex: abdomen dull ferruginous, tuberculated,

cylindrical; segments closely anchylosed: legs very short and slender. Length of the thorax 1 line; of the abdomen 23 lines.

a. Ceylon. From Mr. Cuming's collection.

30. Termes lateralis.

Piceus, gracilis, linearis, subtus, antennis pedibusque fulvis; caput antice fulvum, thorace paullo latius; alæ fuscæ.

Piceous, slender, linear, shining, minutely pubescent, tawny beneath: head subelliptical, much longer than broad, depressed on the disk, tawny in front, a little broader than the thorax: ocelli two, small, one on each side, near the eye: mandibles small, acute, piceous towards the tips: antennæ tawny: prothorax scutcheon-shaped, nearly twice broader than long, very slightly concave in front, convex and narrower behind: abdomen hardly longer than the thorax: legs tawny: wings brown, full twice the length of the body; veins brown; transverse veins along the subcostal space numerous and oblique, very indistinct; discal longitudinal vein emitting about nine oblique secondary veins, two of them forked. Length of the body $1\frac{3}{4}$ line; of the wings $6\frac{1}{2}$ lines.

a. Sierra Leone. Presented by the Rev. S. F. Morgan.

31. Termes anticus.

Fulvus, subtus, antennis pedibusque testaceis; caput antice testaceum; alæ albidæ, ad costam testaceæ.

Female.—Tawny, pubescent, testaceous beneath: head a little longer than broad, as broad as the thorax, testaceous in front: ocelli two, one on each side, between the eyes and close to them: mandibles short: antennæ testaceous, a little longer than the head, with less than twenty joints; joints increasing in length towards the tips: prothorax subquadrate, a little broader than long: abdomen sublinear, a little broader and shorter than the thorax: legs testaceous; fourth joint of the tarsi longer than the three preceding joints: wings whitish, finely rugulose, twice the length of the body; veins along the costa tawny and including a testaceous space; the other veins white and very indistinct; about twelve nearly upright transverse veins and about fifteen secondary veins. Length of the body 3 lines; of the wings 9 lines.

a. Honduras. From Mr. Miller's collection.

32. Termes indecisus.

Fulvus, subtus, antennis pedibusque testaceis; alæ limpidæ.

Tawny, sublinear, pubescent, shining, testaceous beneath: head elliptical, depressed above, with a slight longitudinal furrow in front, testaceous towards the mouth, as broad as the thorax: ocelli two, one on each side, close to the eye: mandibles with black tips: antennæ pale testaceous, not longer than the head: prothorax nearly twice broader than long, slightly concave in front, convex behind and on each side: abdomen broader but hardly longer than the thorax, slightly increasing in breadth towards the tip: legs pale testaceous; fourth joint of the tarsi as long as all the preceding joints: wings limpid, full twice the length of the body; costal and subcostal veins testaceous; all the other veins colourless and very indistinct. Length of the body 2 lines; of the wings 9 lines.

a. Columbia. From Dr. Cuming's collection.

33. Termes brevis.

Fulvus, linearis, subtus pedibusque testaceis; abdomen supra piceum; alæ albo-limpidæ.

Tawny, shining, linear, testaceous beneath: head nearly elliptical, very much longer than broad, slightly depressed on the disk, as broad as the thorax: ocelli two, one on each side, close to the eye: antennæ tawny, not longer than the head; joints of equal length: prothorax twice broader than long, very slightly concave in front, equally convex behind, convex on each side: abdomen linear, piceous above, a little longer but not broader than the thorax: legs pale testaceous; fourth joint of the tarsi a little longer than all the preceding joints: wings whitish, limpid, full twice longer than the body; costal and subcostal veins tawny; subcostal vein very near the costal, with eight oblique transverse veins between them; all the other veins colourless and very indistinct. Length of the body 2 lines; of the wings 8 lines.

a, *b*. Jamaica. From Mr. Gosse's collection.

34. Termes fumipennis.

Piceus, subtus, antennis pedibusque fulvis; caput antice fulvum; abdomen subtus luteum; alæ fuscæ.

Piceous, pubescent, shining, nearly linear, tawny beneath: head nearly elliptical, very much longer than broad, depressed on the disk, tawny in front, as broad as the thorax: ocelli two, one on each side, close to the eye: mandibles with black tips: antennæ tawny, a little longer than the head; joints of nearly equal length: prothorax nearly twice broader than long, concave in front, convex behind, slightly convex on each side: abdomen fusiform, luteous beneath, a little longer and broader than the thorax: legs tawny; tibiæ darker than the femora; fourth joint of the tarsi nearly twice the length of all the preceding joints: wings brown, more than twice the length of the body; veins brown, no transverse veins between the costal and subcostal, but numerous indistinct, transverse, oblique veins between the latter and the next longitudinal vein which emits two branches: discal longitudinal vein with twelve secondary veins. Length of the body $2\frac{1}{2}$ lines; of the wings 12 lines.

a, *b*. New Holland. Presented by the Entomological Club.

35. Termes australis.

Testaceus; caput supra ferrugineum; alæ sublimpidæ.

Testaceous, pubescent: head longer than broad, as broad as the thorax, ferruginous above except in front, and a slight stripe on the disk: ocelli two, one on each side, between the front of the eyes and close to them: mandibles piceous towards the tips, with two acute teeth: antennæ with less than twenty joints, not longer than the head; joints increasing in length towards the tips: prothorax subquadrate, nearly linear, almost twice broader than long: abdomen subelliptical, a little broader and longer than the thorax: legs rather stout; fourth joint of the tarsi twice the length of all the preceding joints: wings sublimpid, twice the length of the body; costal and subcostal veins pale testaceous; the other veins very indistinct; no transverse oblique veins in front. Length of the body 3 lines; of the wings 10 lines.

a. Adelaide. Presented by the Entomological Club.
b. New Holland. Presented by the Haslar Hospital.

T. australis ?—Testaceous, pubescent, shining: head tawny, ferruginous in front, broader and longer than the thorax: eyes and ocelli none: mandibles black, stout, curved, acute, with a tooth near the base: antennæ with about twenty-three short joints, much shorter than the head: prothorax somewhat obconical, slightly convex in front, very convex along the hind border: mesothorax and metathorax very short: abdomen slightly decreasing in breadth from the base to the tip, a little longer than the thorax: legs of moderate length; fourth joint of the tarsi full twice the length of all the other joints. Length of the body 4 lines.

a. New Holland. Presented by the Haslar Hospital.

T. australis ?—Testaceous, pubescent, shining: head elliptical, tawny, depressed above, ferruginous in front, longer and broader than the thorax: eyes and ocelli none: mandibles black, stout, nearly straight, with hooked tips, armed with two broad teeth: antennæ tawny, shorter than the head; joints with whitish tips, successively decreasing in length: prothorax full twice broader than long; fore border slightly concave; sides and hind border convex: abdomen subfusiform, a little broader and longer than the thorax: legs rather stout; fourth joint of the tarsi more than twice the length of all the other joints. Length of the body 3 lines.

a. Van Dieman's Land. From Dr. Hooker's collection.

T. australis ? Immature. — Testaceous, pubescent, shining: head short-elliptical, depressed on the disk, blackish on each side between the antennæ and behind the clypeus: eyes and ocelli none: antennæ shorter than the head; joints very short: prothorax full twice broader than long, hardly concave in front, convex behind and on each side: abdomen longer than the thorax: fourth joint of the tarsi full twice the length of all the other joints. Length of the body 3 lines.

a. New Holland. Presented by the Haslar Hospital.

T. australis ? Immature.—Testaceous, like the last: head narrower, with a piceous spot on each side between the antennæ which are almost as long as the head: abdomen subfusiform, very much broader and longer than the thorax. Length of the body 3 lines.

a. Van Dieman's Land. From Dr. Hooker's collection.

36. Termes obscurus.

Ferrugineus ; caput antice fulvum ; antennæ testaceæ ; pedes fulvi ; alæ sordide albidi.

Ferruginous, pubescent, sublinear: head elliptical, much longer than broad, tawny in front, a little narrower than the thorax: ocelli two, small, one close to the eye on each side: mandibles small: antennæ testaceous, mutilated, not longer than the head? joints of nearly equal length: prothorax very much broader than long, slightly concave in front, equally convex behind, hardly rounded on each side: abdomen linear, rounded at the tip, shorter than the thorax: legs tawny: wings dingy white, slightly rugulose and opaque; costal and subcostal veins tawny, a few very oblique transverse veins between them; the other veins whitish, few and indistinct. Length of the body 2½ lines; of the wings 7 lines.

a. Swan River. Presented by Sir John Richardson.

37. Termes convexus.

Ferrugineus ; subtus, abdomen, antennis pedibusque fulvis ; alæ subfuscæ.

Ferruginous, smooth, shining, linear, pubescent, tawny beneath: head elliptical, much longer than broad, tawny about the mouth, hardly narrower than the thorax: ocelli two, small, one close to the eye on each side: mandibles small, bidentate, black towards the tips: antennæ tawny, shorter than the head, with about thirteen joints: prothorax with an indistinct discal furrow, very much broader than long, slightly concave in front, almost straight behind, convex on each side: abdomen hardly longer than the thorax: legs tawny; fourth joint of the tarsi as long as all the preceding joints: wings pale brown, slightly rugulose and opaque; costal and subcostal veins ferruginous, with about twelve oblique transverse veins between them; the other veins very pale and indistinct, with rows of punctures between them and along them; about twelve secondary oblique veins proceeding to the hind border. Length of the body 1½ line; of the wings 5 lines.

a. Van Dieman's Land. From Mr. A. J. Smith's collection.

38. Termes Guatimalæ.

Ferrugineus, subtus testaceus; prothorax rufescens; pedes testacei.

Ferruginous, sublinear, very pubescent, shining, testaceous beneath: head elliptical, flat above: ocelli two, one on each side, close to the eye: mandibles small: antennæ 20-jointed? fully as long as the head: prothorax reddish, nearly twice broader than long, very concave in front, slightly convex on each side, straight behind: abdomen a little longer than the thorax: legs testaceous; fourth joint of the tarsi nearly twice the length of all the other joints: wings removed. Length of the body 3 lines.

a. Guatimala. From M. Deby's collection.

39. Termes Mexicanus.

Fulvus; subtus, antennis pedibusque testaceis; alæ hyalinæ.

Tawny, slender, linear, shining, thinly pubescent, testaceous beneath: head short-elliptical, with a slight longitudinal furrow, depressed between the eyes, as broad as the thorax: clypeus convex along the hind border: ocelli two, one on each side, near the eye: palpi short, testaceous: antennæ testaceous, 18-jointed, much shorter than the head; first, second, and third joints of moderate length; the rest very short: prothorax subquadrate, much broader than long, with a slight longitudinal furrow in front; sides nearly straight: abdomen longer than the thorax: legs testaceous, short and stout: fourth joint of the tarsi longer than all the preceding joints: wings hyaline, nearly twice the length of the body; veins along the fore border testaceous, with a few ramifications towards the tips; the other veins very indistinct. Length of the body $4\frac{1}{2}$ lines; of the wings 14 lines.

a. Mexico. Presented by E. P. Coffin, Esq.

40. Termes pusillus.

Piceus; caput antice testaceum; tarsi testacei; alæ subhyalinæ.

Piceous, sublinear, pubescent, shining: head elliptical, depressed above, testaceous in front, as broad as the thorax: eyes

small: ocelli none? prothorax more than twice broader than long, a little impressed in front, slightly convex on each side: abdomen a little broader but not longer than the thorax: tarsi testaceous; fourth joint twice the length of all the other joints: wings subhyaline, minutely rugulose, twice the length of the body; costal and subcostal veins testaceous; the other veins almost obsolete. Length of the body 2 lines; of the wings 9 lines.

a. ——— ?

41. Termes occidentis.

Fulvus, latus, linearis; caput crassum; pedes validi.

Tawny, linear, very broad, pubescent, shining: head subelliptical, very thick, full as broad and as long as the thorax, depressed on the disk, with a tooth on each side in front near the base of the antenna: eyes very small: ocelli none: mandibles black, stout, long, slightly curved, bidentate: prothorax more than twice broader than long, narrower behind, very concave along the front, hardly convex on each side and behind: abdomen short: legs very thick; fourth joint of the tarsi full twice the length of all the other joints: wings rudimentary. Length of the body 5 lines.

a, *b*. West Coast of America. Presented by Captain Wood and Lieut. Wood.

Genus 2. EMBIA.

Labium profunde bifidum, palpis 3-articulatis instructum. Antennæ 17-articulatæ. Tarsi 3-articulati, articulo 1o maximo. Alarum venæ omnes corneæ, venis recurrentibus inter se junctæ.

Embia, *Latr.*; *Westw.*; *Burm.*; *Blanch.*; *Ramb.*

1. Embia Savignyi.

Testacea; alæ fuscæ, albo striatæ. Long. 4½ lin.

Embia ———, *Descript. de l'Egypte, Neur.* pl. 2, f. 9, 10.
Embia Savignyi, *Westw. Trans. Linn. Soc.* xvii. 372, pl. 2, f. 1. *Burm. Handb. Ent.* ii. 770. *Ramb. Hist. Nat. Ins. Neur.* 311, 1.
Embia Ægyptiaca, *Blanch. Hist. Nat. Ins.* 48.

a, *b*. Egypt. Presented by C. Lamb, Esq.

2. Embia Latreillii.

Oligotoma Saundersii, *Westw. ?*
Embia Latreillii, *Ramb. Hist. Nat. Ins. Neur.* 312, 2.

Bombay; Isle of France; Madagascar.

E. Latreillii? *Ferrugineus, gracilis, pubescens; prothorax sulcatus; pedes testacei, femoribus tibiisque latis; alæ subfuscæ, albido strigatæ.*

Pale ferruginous, slender, pubescent, like a *Raphidia*, and may serve as a connecting link thereto from the *Termitina:* head subfusiform, broader than the thorax: eyes with large facets: ocelli none: mandibles testaceous, short, tridentate: palpi short: antennæ very pubescent: prothorax longer than broad, nearly obconical, with a slight longitudinal furrow: abdomen linear, shorter than the thorax, with two short articulated filaments at the tip: legs testaceous, rather short; femora and tibiæ broad: wings pale brown with whitish streaks, a little shorter than the body; veins pubescent, much like those of *Olyntha Brasiliensis* in structure. Length of the body 2¼ lines; of the wings 4½ lines.

a. ———? From Mr. Children's collection.

3. Embia Klugi.

Ferrugineo-fusca; abdominis setæ sat longæ; pedes dilatati.

Embia Klugi, *Ramb. Hist. Nat. Ins. Neur.* 313, 3.

Ferruginous-brown, nearly the size of *E. Savignyi:* head ovate; hind part moderately contracted: prothorax narrower than the head, narrower in front, with a transverse furrow before its fore border: abdominal appendages rather long; last joint longer than the first: legs dilated.

Brazil.

4. Embia Solieri.

Ferrugineo-fusca, E. Savignyi *minor; tarsorum articulus* 1us *minus dilatatus et arcuatus.*

Embia Solieri, *Ramb. Hist. Nat. Ins. Neur.* 313, 4.

"Larva.—Ferruginous-brown, a little smaller than *E. Savignyi*: head smaller, more depressed, almost quadrate: antennæ with shorter joints: prothorax narrower than the head, with a furrow before the middle, hardly sinuated on each side: metathorax larger than the prothorax, or than the mesothorax: first joint less dilated and curved than that of *E. Savignyi*, and of a different form."

South France.

Genus 3. OLIGOTOMA.

Labium profunde bifidum, palpis 3-articulatis instructum. Antennæ 11-articulatæ. Tarsi 3-articulati, articulo 1o maximo. Alarum venæ omnes corneæ, venis recurrentibus inter se junctæ.

Oligotoma, *Westw. Linn. Trans.* xvii. 369; *Burm.*

1. Oligotoma Saundersii.

Testaceo-fuscescens, segmentis abdominalibus pallide marginatis; alarum areolæ albido vittatæ. Long. $3\frac{1}{4}$ lin.

Oligotoma Saundersii, *Westw. Trans. Linn. Soc.* xvii. 373, pl. 2, f. 2. *Burm. Handb. Ent.* ii. 2, 770.

Bengal.

Genus 4. OLYNTHA.

Labium profunde bifidum, palpis 3-articulatis instructum. Antennæ 30-articulatæ. Tarsi 3-articulati, articulo 1o maximo. Alarum venæ omnes corneæ, venis recurrentibus inter se junctæ.

Olyntha, *Gray*, *Griff. Anim. Kingd.* xv.; *Westw.*; *Burm.*

1. Olyntha Brasiliensis.

Piceo-nigra; prothorace femoribusque anterioribus ochraceis; antennæ apice albæ; alæ albo vittatæ, cercis flavis. Long. $7\frac{1}{2}$ lin.

Olyntha Brasiliensis, *Gray*, *Griff. Anim. Kingd.* xv. 347, pl. 72, f. 2. *Westw. Trans. Linn. Soc.* xvii. 373, pl. 2, f. 3. *Burm. Handb. Ent.* ii. 2, 770, 1.

a. Brazil. From Mr. Children's collection.

2. Olyntha ruficapilla.

Fusca; capite et prothorace rufis; alæ albo striatæ, cercis fuscis. Long. $3\frac{1}{2}$ lin.

Olyntha ruficapilla, *Burm. Handb. Ent.* ii. 2, 770, 2.

Brazil.

3. Olyntha staphilinoides.

Piceus, testaceo varius; caput antice ferrugineum; pedes testacei, femoribus piceo strigatis.

Larva? — Piceous, sublinear, slender, flat, dull, pubescent: head somewhat conical, ferruginous in front, not longer than broad, much broader than the thorax; a transverse suture between the eyes forms a very obtuse angle, from whence a longitudinal suture proceeds to the hind border: clypeus pale brown, shining; eyes of moderate size: ocelli none: palpi brown: antennæ mutilated;

first joint broad: prothorax slightly conical, not broader than long; borders and dorsal stripe testaceous: mesothorax and metathorax each as large as the prothorax; mesothorax partly testaceous: abdomen linear, not broader or longer than the thorax, with a short, broad, testaceous stripe on the disk: legs testaceous; femora with piceous streaks. Length of the body $5\frac{1}{2}$ lines.

The broader head of this species and the shape of its prothorax distinguish it from *O. Brasiliensis*.

a. Brazil. From Mr. Stevens' collection.

Sub-order 5. EPHEMERINÆ.

Partes oris obliteratæ, subnullæ. Abdominis apex bi- vel trisetus. Tarsi 4-5-articulati. Alæ duo vel quatuor, inæquales, homonomæ, membranaceæ, venis transversis plurimis. Larvæ aquaticæ, branchiopneustæ, nudæ.

Ephemerinæ, *Latr.; Pictet; Blanchard.*
Ephemera, *Linn.; Fabr.; Deg.; Barb.; Gmel.; Berk.; Stew.; Turt.; Panz.*
Agnatha, *Cuvier.*
Ephemeridæ, *Leach; Steph.; Curt.; Westw.*
Biomorphotica, p., *Westw.*
Arkiptera, p., *Brullé; Delaporte.*
Ephemerina, *Newman.*

"Antennæ very short, 3-jointed; terminal joint longest, and a mere seta. Ocelli three. Mouth and prothorax atrophied. Abdomen terminating in long caudal multiarticulate setæ. Legs simple; fore-legs longer and porrected in the males. Wings much reticulated with veins, very unequal in size, the fore-wings being ample, the hind small, and sometimes totally wanting; when at rest they are erect and meet vertically over the back. *Larva.*—Aquatic, breathes by means of external gills, which also serve as organs of natatory locomotion. Antennæ long, filiform, multiarticulate. Mandibles corneous, small, feeble. Setæ long, filiform, multiarticulate. Legs long and strong. Frequents the bottom of ponds, and especially of running streams, secretes itself under stones, and appears to feed on the decomposing organic matter which mingles so largely in the sediment of all waters. *Pupa.*—Similar to the

larva in form, habit and food. Rudiments of wings very perceptible at the posterior angles of the wing-bearing segments. Attains its perfect state by a double ecdysis; after the first, the insect retains the soft, silky pellicle which invests a great number of insects, and which, in all other cases, is shed with the pupa-case. After a feeble flight the insect settles, and in the course of a few hours divests itself of the pellicle, and has then accomplished all its transformations."—*Newman.*

Genus 1. EPHEMERA.

Oculi remoti, maris simplices. Pedes bene determinati. Setæ caudales tres, æquales. Alæ reticulatæ, quatuor, venis plurimis transversis. Larva subiens, instrumentis respiratoriis quasi amentales.

Ephemera, *Linn.*, *&c.*
Ephemeræ trisetæ, p., *Zett.*
Ephemeridæ, p., *Newman.*

Eyes simple in both sexes, always separated by a broad interval: wings four, with numerous cross-veins; hind-wings almost as long as one-fourth of the fore-wings, with a complete neuration and an angular costal border: abdominal tentaculæ of middle size; internal appendages hidden, very small: three tail-bristles of equal length.

1. Ephemera vulgata.

Obscure fusca; abdomen lutescens; setæ caudales nigricantes; pedes pallidi, obscure nebulosi; alæ fuscescentes, anticæ costa pallida fusca, maculis tribus vel quatuor, posticæ maris macula media.

Ephemera vulgata, *Linn. Syst. Nat. Ed.* 12, ii. 906, 1. *Fauna Suecica*, 1472, 1. *Geoffr. Hist. Ins.* ii. 238, 1. *Scop. Ent. Carn.* 264, 683. *Schæff. Elem.* pl. 72. *Deg. Ins.* ii. 621, pl. 16. *Müll. Prod. Zool. Dan.* 142, 1641. *Sulz. Ins.* fig. 103. *Mus. Lesk.* i. 50, 13. *Schrank, Ins. Austr.* 602; *Faun. Boic.* 1937. *Gmel. Ed. Syst. Nat.* i. 5, 2678, 1. *Barbut, Gen.* 213,

pl. 11, fig. inf. dext.? *Fourcroy, Ent. Par.* 351, 1. *De Vill. Linn. Ent.* iii. 16, 1. *Berk. Syn. Nat. Hist.* i. 150. *Rossi, Faun. Etrusc.* ii. 672. *Oliv. Enc. Méth.* vi. 417, 1. *Stew. Elem. Nat. Hist.* ii. 211. *Shaw, Gen. Zool.* vi. 249, pl. 81, fig. sup. *Fabr. Ent. Syst.* ii. 68, 1. *Panz. Faun. Ins. Germ.* xciv. fig. 16. *Cederhielm, Faun. Ingr. Prod.* 134, 407. *Turt. Syst. Nat.* iii. 393. *Walcken. Faun. Par.* ii. 8, 1. *Latr. Hist. Nat. Ins.* xiii. 94, 1. *Wood, Ill. Linn. Gen. Ins.* ii. 23, pl. 47. *Duméril, Cons. Gen. Ins.* pl. 28, f. 4, 5. *Sam. Ent. Comp.* pl. 7, f. 2. *Zett. Ins. Lap.* 1044. *Steph. Ill. Brit. Ent. Mand.* vi. 55, 1. *Burm. Handb. Ent.* ii. 804, 1. *Blanch. Hist. Nat. Ins.* iii. 53, 1. *Ramb. Hist. Nat. Ins. Neur.* 293, 1. *Westw. Intr. Class. Ins.* ii. 25, 61, 1—16. *Pictet, Hist. Nat. Ins. Neur. Eph.* 126, 1, pl. 1—5. *Ramb. Hist. Nat. Ins. Neur.* 293, 1.

a—c. England.

Var. ? Ephemera hispanica, *Ramb. Hist. Nat. Ins. Neur.* 294.

"A little smaller than *E. vulgata*, which it resembles: thorax black: abdomen yellow, spotted with black: filaments reddish with brown rings, very long: anal appendages much attenuated at the tip, with the two last joints longer and more slender than in *E. vulgata*, but not suddenly contracted at the base of the penultimate as in *E. lutea*: legs blackish, a little shorter than those of *E. lutea*: wings slightly reddish, almost hyaline; almost all the veins bordered with brown, with which the spots of the middle are confluent."

Madrid.

2. Ephemera Danica.

Oculi fusci; thorax maris nigricans; setæ caudales fulvæ, fusco annulatæ; alæ anticæ maculis tribus vel quatuor, posticæ immaculatæ.

Ephemera Danica, *Müll. Faun. Fridr.* 554; *Syst. Ins.* pl. 9, f. 5, 6. *Prod. Zool. Dan.* 142, 1640. *De Vill. Linn. Ent.* iii. 18, 6. *Schæff. Icon. Ins. Ratisb.* pl. 9, f. 5, 6. *Pictet, Hist. Nat. Neur. Eph.* 130, 2, pl. 7.

Ephemera vulgata? *Donovan, Nat. Hist. Brit. Ins.* iv. 53, pl. 128.

Ephemera maculata, *De Vill. Linn. Ent.* iii. 22, 17.

Ephemera cognata, *Steph. Ill. Brit. Ent. Mand.* vi. 516, 2. *Curt. Brit. Ent.* 708.

a, *b*. England.

3. Ephemera glaucops.

Oculi cyanei; thorax maris flavus; setæ caudales fulvæ, fusco annulatæ; alæ anticæ maculis tribus vel quatuor, posticæ immaculatæ.

Ephemera lutea, *Sulz. Ins.* 171, pl. 24, f. 6. *Burm. Handb. Ent.* ii. 804, 2.

Ephemera glaucops, *Pictet, Hist. Nat. Neur. Eph.* 132, 3, pl. 8, f. 1—3.

Europe.

Var.? Ephemera flavicans, *Ramb. Hist. Nat. Ins. Neur.* 296, 7.

"A little larger than *Cloeon Diptera:* yellow: abdomen dull red above, darker on the borders of the segments: filaments three, red, twice the length of the body, with brown rings; anal appendages horn-shaped, long, slender, contiguous at the tip and forming an oval by their reunion: legs yellow; anterior legs long, reddish, almost as long as the body, with red rings at the tips of the thighs, and with brown rings on the other joints: wings large, hyaline, very slightly yellowish, a little darker along the fore border; veins yellow; transverse veinlets brownish. Female paler than the male."

France.

4. Ephemera guttulata.

Alæ anticæ confertim maculatæ.

Ephemera guttulata, *Pictet, Hist. Nat. Neur. Eph.* 135, pl. 8, f. 4.

Switzerland.

5. Ephemera simulans.

Picea; setæ pubescentes, corpore longiores; pedes fulvi, antice obscuriores; alæ subcinereæ, anticæ fusco maculatæ et subfasciatæ, venis nebulosis.

Piceous: abdomen more than twice the length of the thorax: setæ pale piceous, pubescent, longer than the body: legs dull tawny; fore-legs darker: wings grayish; veins black, clouded except towards the tips and along the hind border with brown, which forms in the disk a spot at one-third of the length, another at two-thirds of the length, and an interrupted band between them. Length of the body 5 lines; of the setæ 6 lines; of the wings 14 lines.

a. River St. Lawrence. Presented by the Entomological Club.

6. Ephemera Colombiæ.

Fulva; antennæ fuscæ; thorax testaceo notatus; abdomen luteum, nigro fasciatum et bivittatum; setæ fuscæ, corpore duplo longiores; pedes fulvi; alæ albidæ, venis testaceis.

Subimago.—Tawny: antennæ brown: thorax with some testaceous marks: abdomen luteous, about twice the length of the thorax, with two black stripes, and with a black band on the hind border of each segment: setæ brown, about twice the length of the body: legs tawny: wings whitish; veins testaceous. Length of the body 4½ lines; of the setæ 9 lines; of the wings 16 lines.

a. Columbia. From Dr. Cuming's collection.

7. Ephemera decora.

Picea; antennæ nigræ, basi fulvæ; abdomen ferrugineo varium; setæ testaceæ, fusco fasciatæ, corpore multo longiores; pedes testacei, antici picei; alæ hyalinæ, fusco maculatæ et apud venas nebulosæ.

Piceous: antennæ black, tawny at the base: abdomen rather more than twice the length of the thorax, partly ferruginous on the disk and about the borders of the segments: setæ testaceous with brown bands on the sutures of the joints, much longer than the body: legs pale testaceous; fore-legs piceous: wings hyaline; veins black, and with the exception of those at the tips and along the hind border deeply clouded with brown which forms a few spots in each disk. Length of the body 5½ lines; of the setæ 12? lines; of the wings 13 lines.

a. Canada. Presented by Dr. Barnston.

8. Ephemera hebes.

Picea; antennæ nigræ; setæ fusco-testaceæ; pedes testacei, antici fusci; alæ cinereæ, venis nigris.

Subimago, Fem.—Dull piceous: antennæ black: abdomen more than twice the length of the thorax: setæ brownish testaceous, mutilated: legs dull testaceous; fore-legs brown: wings gray; veins black, not strongly marked. Length of the body 4 lines; of the wings 10 lines.

a. Newfoundland. Presented by W. C. St. John, Esq.

9. Ephemera australis, Mas.

Picea; vertice antennisque nigris; thoracis latera flavo maculata; abdomen rufum; setæ fulvæ, corpore plus duplo longiores; pedes fulvi, antici fusci; alæ limpidæ, costa apicali fusca. Subimago? *Ferrugineo-fusca; setæ corpore longiores; alæ anticæ fusco bifasciatæ.*

Male.—Piceous: head black above: antennæ black: thorax with yellow spots on each side: abdomen red, paler beneath, hardly twice the length of the thorax: setæ tawny, much more than twice the length of the body: legs tawny; fore-legs brown: wings limpid; veins black, very slender: fore border of the fore-wings brown along one-third of the length from the tip. Length of the body 4 lines; of the setæ 11 lines; of the wings 9 lines.

a—d. Van Dieman's Land. From Dr. Hooker's collection.

Subimago?—Ferruginous-brown; borders of the segments paler: antennæ black: abdomen full twice the length of the thorax: setæ longer than the body: wings limpid; veins black, clouded with brown: fore-wings with two broad, irregular, interrupted, and very oblique bands. Length of the body 3 lines; of the setæ 6 lines; of the wings 9 lines.

a—d. Van Dieman's Land. From Dr. Hooker's collection.

Genus 2. POTAMANTHUS.

Oculi maris duplices. Pedes bene determinati. Setæ caudales tres. Alæ reticulatæ, quatuor, venis transversis plurimis. Larva non depressa, repens, non subiens, cauda simplici.

Potamanthus, *Pictet, Hist. Nat. Neur. Eph.* 197.
Ephemera, p., *Steph.*
Ephemeræ trisetæ, p., *Zett.*
Ephemeridæ, p., *Newman.*

Each of the ordinary eyes of the male surmounted by a large reticulated eye, whose superior border rests against the front eye: wings four, with numerous transverse veins, which are delicate, and often invisible to the unaided eye: hind-wings smaller than those of the three preceding genera, but with a complete neuration: abdominal tentaculæ of middle size; internal appendages conical, of moderate size: three tail-bristles of equal length.

1. Potamanthus Ferreri.

Corpus læte flavum; setæ caudales non annulatæ; alæ distinctissime reticulatæ, venis transversis pallidis.

Potamanthus Ferreri, *Pictet, Hist. Nat. Neur. Eph.* 203, pl. 25, f. 1.
Switzerland.

2. Potamanthus luteus.

Corpus læte flavum; setæ caudales annulatæ; alæ distinctissime reticulatæ, venis transversis fuscescentibus.

Ephemera lutea, *Linn. Syst. Nat. Ed.* 12, ii. 906, 2. *Geoffr. Hist. Ins.* ii. 239, 2. *Schæff. Icon. Ins. Ratisb.* 42, f. 7? *Sulz. Abg. Gesch.* 171, pl. 24, f. 6. *Fabr. Ent. Syst.* ii. 68, 2. *Gmel. Ed. Syst. Nat.* i. 2628, 2. *Schrank, Ins. Austr.* 603; *Faun. Boic.* 1939. *De Vill. Linn. Ent.* iii. 17, 2. *Rossi, Faun. Etrusc.* ii. 673. *Oliv. Enc. Méth.* vi. 417, 2. *Walck. Ent. Par.* ii. 8, 2. *Latr. Hist. Nat. Ins.* xiii. 95, 2.

Turt. Syst. Nat. iii. 393. *Blanch. Hist. Nat.* iii. 54, 1. *Steph. Ill. Brit. Ent. Mand.* vi. 57, 5. *Ramb. Hist. Nat. Ins. Neur.* 294, 2.
Ephemera hyalinata, *Panz. explicat. Schæff. tabul.*
Baëtis marginalis? *Burm. Handb. Ent.* ii. 801, 3.
Potamanthus luteus, *Pictet, Hist. Nat. Neur. Eph.* 2052.

a. England. Presented by F. Walker, Esq.

Subimago? Ephemera chloretica, *Ramb. Hist. Nat. Ins. Neur.* 296, 9.

A little larger than *Cloeon Diptera*, resembling *E. flavicans*, R.: yellow, with a dull red band on the dorsal part of the abdomen beneath, red on the prothorax: filaments three, longer by half than the body, dull, with blackish rings, slightly downy: anal appendages rather thick, moderately attenuated and tapering at the tips: legs yellow, much shorter than the body; feet 4-jointed, with indistinct brownish rings; anterior legs slightly reddish: wings very slightly yellowish, a little more tinged at the base and along the fore border; reticulation yellowish; membrane slightly opaque.

Paris.

3. Potamanthus marginatus.

Corpus obscurum; alæ indistincte reticulatæ, regione subcostali nigricante.

Ephemera marginata, *Linn. Syst. Nat. Ed.* 12, ii. 906, 3. *Geoffr. Hist. Ins.* ii. 239, 3. *Müll. Zool. Dan. Prodr.* 142, 1642. *De Vill. Linn. Ent.* iii. 17, 3. *Oliv. Enc. Méth.* vi. 417, 3. *Fabr. Ent. Syst.* ii. 69, 4. *Cederhielm, Faun. Ingr. Prod.* 134, 408. *Schrank, Faun. Boic.* 1941. *Stew. Elem. Nat. Hist.* ii. 211? *Shaw, Gen. Zool.* vi. pl. 81, fig. inf.? *Walck. Faun. Par.* ii. 8, 3. *Latr. Hist. Nat. Ins.* xiii. 95, 3. *Steph. Ill. Brit. Ent. Mand.* vi. 57, 6. *Blanch. Cours Hist. Nat.* iii. 54, 3.
Ephemera procellaria, *Roesel, Ins.* ii. pl. 12, f. 1, 2.
Ephemera viridescens, *Fourcr. Ent. Par.* 351, 3.
Potamanthus marginatus, *Pictet, Hist. Nat. Neur. Eph.* 208, 3, pl. 25, f. 4, 5.

a. England. Presented by F. Walker, Esq.
b. England.

Var.? Ephemera rufa, *Ramb. Hist. Nat. Ins. Neur.* 296, 8.

A little larger than *Cloeon Diptera:* red: body thick, rather short, rather dark red above: eyes very prominent on the outer side: filaments three, blackish: legs rather dark red, perceptibly shorter than the body, with 5-jointed tarsi; anterior legs brownish: wings hyaline, long, hardly broad, yellowish at the base and along the fore border; reticulation brownish, tolerably distinct; veins yellow towards the base.

Tarbes.

4. Potamanthus Geerii.

Corpus longum, plerumque nigro-fuscum; mesothorax non vittatus; setæ caudales fuscæ; pedes violaceo-fusci; alæ indistincte reticulatæ, regione subcostali vix colorata; alæ subimaginis maculatæ.

Ephemera vespertina, *Linn. Syst. Nat.* ii. 906. *Deg. Ins.* ii. 646, pl. 17, f. 11—16. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 211. *Zett. Ins. Lap.* 1044, 5.
Ephemera albipennis, *Retz. Gen. de Deg.* 57, 181.
Baëtis fusa, *Burm. Handb. Ent.* ii. 800, 1.
Leptophlebia, *Westw. Intr. Class. Ins.* ii. 31.
Potamanthus Geerii, *Pictet, Hist. Nat. Neur. Eph.* 211, 4, pl. 26, f. 1—3.

Europe.

5. Potamanthus talcosus.

Piceo-fuscus; abdominis apice pedibus setisque luridis; alis hyalinis immaculatis.

Ephemera talcosa, *Steph. Ill. Brit. Ent. Mand.* vi. 57, 4.
Potamanthus talcosus, *Pictet, Hist. Nat. Neur. Eph.* 234.

England.

6. Potamanthus stigma.

Piceo-fuscus; abdomine pallidiore; pedibus setisque luridis immaculatis; alis hyalinis pallide lutescentibus haud maculatis, anticarum costa ad apicem luteo-fuscescente.

Ephemera stigma, *Steph. Ill. Brit. Ent. Mand.* vi. 56, 3.
Potamanthus stigma, *Pictet, Hist. Nat. Neur. Eph.* 235.

P. Geeri?

England.

7. Potamanthus dispar.

Piceo-niger; abdominis basi pedibusque pallide rufo-piceis; setis luridis fusco subannulatis.

Ephemera dispar, *Steph. Ill. Brit. Ent. Mand.* vi. 58, 8.
Potamanthus dispar, *Pictet, Hist. Nat. Neur. Eph.* 234.

P. Geeri?

England.

8. Potamanthus castaneus.

Corpus longum, plerumque nigro-fuscum; mesothorax vitta discali; setæ caudales fuscæ; pedes omnino fusci; alarum venæ indistincte reticulatæ, regione subcostali vix colorata; alæ subimaginis maculatæ.

Potamanthus castaneus, *Pictet, Hist. Nat. Neur. Eph.* 215, 5, pl. 26, f. 4, 5.

Switzerland.

9. Potamanthus brunneus.

Corpus longum, plerumque nigro-fuscum; setæ caudales flavescentes; alæ indistincte reticulatæ, regione subcostali vix colorata; alæ subimaginis cinereæ, unicolores.

Potamanthus brunneus, *Pictet, Hist. Nat. Neur. Eph.* 217, 6, pl. 27.

Switzerland.

10. Potamanthus fuscus.

Obscure piceus; vertice et basi pedum anteriorum ferrugineis; pedibus posterioribus ochraceis; setis luridis fusco punctatis.

Ephemera fusca, *Curt. Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 58, 9.
Potamanthus fuscus, *Pictet, Hist. Nat. Neur. Eph.* 235.

P. brunneus, Var.?

England.

11. Potamanthus helvipes.

Piceo-niger obscurus; pedibus helvolis; setis pallide luridis immaculatis; alis hyalinis.

Ephemera helvipes, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 14.
Potamanthus helvipes, *Pictet, Hist. Nat. Neur. Eph.* 235.

P. fuscus?

England.

12. Potamanthus cinctus.

Corpus obscurum; abdomen nigricans, segmentis mediis maris albis; alæ indistincte reticulatæ, regione subcostali vix colorata.

Ephemera cincta, *Retz. Deg. Gen. et Sp. Ins.* 57, 182. *Deg. Ins.* ii. 650, pl. 17, f. 17, 18.

Ephemera dubia? *Steph. Ill. Brit. Ent. Mand.* vi. 59, 15. *Fuscus subnitidus; abdominis basi pedibusque pallidis; setis pallide luridis immaculatis; alis hyalinis, costa subflavescente.*

Potamanthus cinctus, *Pictet, Hist. Nat. Neur. Eph.* 219, 7, pl. 28.

a. England.

13. Potamanthus apicalis.

Fusco-ferrugineus, nitidus; abdominis basi pallida; pedibus ochraceo-ferrugineis; alis hyalinis.

Ephemera apicalis, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 11.
Potamanthus apicalis, *Pictet, Hist. Nat. Neur. Eph.* 236.
Ephemera halterata, *Fabr. Ent. Syst.* ii. 69? *Shaw, Gen. Zool.* vi. 253, pl. 81, fig. med.?

Europe.

14. Potamanthus inanis.

E. cincto *affinis; abdominis segmenta* 1o *ad* 3*um nigra.*

Ephemera inanis, (*Mus. Lesk.*) *Enc. Méth.* vi. 421.
Potamanthus inanis, *Pictet, Hist. Nat. Neur. Eph.* 235.

Europe.

15. Potamanthus erythrophthalmus.

Corpus latum, breve, læte coloratum; mesothorax imaginis distincte lineatus; abdomen fere unicolor; alæ indistincte reticulatæ, regione subcostali vix colorata.

Ephemera erythrophthalma, *Schr. Faun. Boic.* 1940.

Ephemera rufescens, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 12. *Pallide rufo-fulvus, subnitidus; pedibus rufescentibus posterioribus pallidioribus; setis luridis fusco-maculatis; alis hyalinis costa flavescente.*

Potamanthus erythrophthalmus, *Pictet, Hist. Nat. Neur. Eph.* 222, 8, pl. 29, 30.

Europe.

16. Potamanthus gibbus.

Corpus latum, breve, læte coloratum; mesothorax maris saltem non lineatus; abdomen fere unicolor; alæ indistincte reticulatæ, regione subcostali vix colorata, venæ subcostalis dimidio apicali nigricante.

Potamanthus gibbus, *Pictet, Hist. Nat. Neur. Eph.* 226, 9, pl. 31, 32.

Switzerland.

17. Potamanthus submarginatus.

Rufo-piceus; pedibus pallidioribus, geniculis posticis nigricantibus; alis hyalinis, costa subochracea.

Ephemera submarginata, *Steph. Ill. Brit. Ent. Mand.* vi. 58, 7.
Potamanthus submarginatus, *Pictet, Hist. Nat. Neur. Eph.* 236.

Allied to *P. erythrophthalmus*.

England.

18. Potamanthus dilutus.

Pallide rufo-ferrugineus; abdomine nigricante; pedibus pallidis; alis hyalinis costa concolore.

Ephemera diluta, *Steph. Ill. Brit. Ent. Mand.* vi. 58, 10.
Potamanthus dilutus, *Pictet, Hist. Nat. Neur. Eph.* 236.

England.

19. Potamanthus roseus.

Pallide roseus, subnitidus; pedibus pallidioribus; setis luridis fusco maculatis; alis hyalinis basi summa et costa dilute roseis.

Ephemera rosea, *Steph. Ill. Brit. Ent. Mand.* vi. 59, 13.
Potamanthus roseus, *Pictet, Hist. Nat. Neur. Eph.* 236.

England.

20. Potamanthus æneus.

Corpus latum, breve, læte coloratum; mesothorax maris saltem non lineatus; abdomen fere unicolor; alæ indistincte reticulatæ, regione subcostali vix colorata, vena subcostali omnino flava.

Potamanthus æneus, *Pictet, Hist. Nat. Neur. Eph.* 229, 10, pl. 33.

Switzerland.

21. Potamanthus halteratus.

Fuscus; abdomen album, apice fuscum; pedes antici albi; setæ corpore quadruplo longiores; alæ albæ.

Ephemera halterata, *Fabr. Ent. Syst.* ii. 69, 6.
Potamanthus halteratus, *Pictet, Hist. Nat. Neur. Eph.* 236.

Europe.

22. Potamanthus minor.

Obscure fuscus, segmentorum marginibus rufescentibus; pedibus pallidis; alis angustis hyalinis costa concolore.

Ephemera minor, *Steph. Ill. Brit. Ent. Mand.* vi. 60, 16.
Potamanthus minor, *Pictet, Hist. Nat. Neur. Eph.* vi. 237.

England.

23. Potamanthus? costalis, Mas.

Niger; thoracis linea ante alas albida; abdomine pedibusque rufo cingulatis; alæ subfumatæ, venis omnibus areolæ marginalis 1æ et 2æ infuscatis. Long. 6 lin.

Baëtis costalis, *Burm. Handb. Ent.* ii. 800, 2.
Potamanthus? costalis, *Pictet, Hist. Nat. Neur. Eph.* vi. 237.

New Holland.

P. costalis? Fem. *Nigro-picea, flavo guttata; thorax rufo-bivittatus; abdomen rufo varium; setæ piceæ; pedes rufi, femoribus piceo bifasciatis, tarsis piceis, antici picei, femoribus rufo fasciatis; alæ limpidæ, venis costalibus nigro-nebulosis.*

Fem.—Piceous black: head and thorax with pale yellow dots: head reddish on each side: antennæ black: thorax with an indistinct reddish stripe on each side: abdomen with some reddish marks, about twice the length of the thorax: setæ piceous: legs red; femora with two piceous bands; tarsi piceous: fore-legs piceous, with a red band near the tip of each femur: wings quite

limpid; veins black; transverse veins numerous and distinct; veins clouded with black along the fore border, which is brown along one-third from the tip. Length of the body 4½ lines; of the wings 12 lines.

a—c. New Holland. Presented by the Entomological Club.

24. Potamanthus? inanis.

Alæ duæ.

Potamanthus? inanis, *Pictet, Hist. Nat. Neur. Eph.* 232, 11, pl. 24, f. 5.

Brazil.

Genus 3. PALINGENIA.

Oculi remoti, maris simplices. Pedes bene determinati. Setæ caudales tres, media maris saltem brevissima. Alæ reticulatæ, quatuor, venis plurimis transversis. Larva subiens, instrumentis respiratoriis foliaceis, ciliatis.

Palingenia, *Burm. Handb. Ent.* ii. 2. *Pictet.*
Ephemeridæ, p., *Newman.*

Eyes simple in both sexes, almost always parted by an interval: wings four, like those of *Ephemera*, but with a more close reticulation: prothorax large: abdominal tentaculæ slightly curved; internal appendages large and conical: median tail-bristle of the male rudimentary.

1. Palingenia virgo.

Corpus flavum, immaculatum; prothorax longior quam latior; seta caudalis media brevissima sed distincta; alæ hyalinæ.

Palingenia virgo, *Pictet, Hist. Nat. Neur.* 141, 1, pl. 9, 10, 11, f. 1—3.

Ephemera virgo, *Oliv. Enc. Méth.* vi. 419, 11. *Reaum. Ins.* vi. 457, pl. 42—44. *Schæff. Abhandl. Ins.* iii. 30; *Icon. Ins. Ratisb.* pl. 175, f. 1—3. *Latr. Hist. Nat. Ins.* xiii. 98, 13.

Ephemera maroccana? *Fabr. Ent. Syst.* ii. 69, 3.
Palingenia horaria, *Burm. Handb. Ent.* ii. 802, 1.
Ephemera albipennis, *Latr. Règne Anim. de Cuv.* v. 252. *Ramb. Hist. Nat. Neuropt.* 296. *Westw. Intr. Class. Ins.* ii. 33. *Blanch. Cours Hist. Nat.* iii. 54.
Ephemera plumosa? *Müll. Zool. Dan. Prodr.* 244.
Ephemera, &c., *Villa, Comparsa Periodica delle Efimere nella Brianza*, 1847.

a. Rhine. Presented by F. Bond, Esq.

2. Palingenia puella.

Corpus flavum, immaculatum; prothorax latior quam longior; seta caudalis media brevissima sed distincta; alæ hyalinæ.

Palingenia puella, *Pictet, Hist. Nat. Neur. Eph.* 145, 2, pl. 11, f. 4.

New Orleans.

3. Palingenia limbata.

Corpus flavo fuscoque varium; prothorax pallide fulvus, fusco bimaculatus; seta caudalis brevissima sed distincta.

Palingenia limbata, *Serville, Guér. Icon. Règne Anim. Ins.* pl. 60, f. 7. *Pictet, Hist. Nat. Neur. Eph.* 146, 3, pl. 12.
Ephemera limbata, *Ramb. Hist. Nat. Ins. Neur.* 295, 4, pl. 8, f. 2.

North America.

4. Palingenia albicans.

Corpus flavum, immaculatum; seta caudalis media brevissima sed distincta; alæ basi violaceæ.

Ephemera albicans, *Percheron, Gen. Ins. Livr.* vi.; *Neuropt.* pl. 6.
Palingenia albicans, *Burm. Handb. Ent.* ii. 803. *Pictet, Hist. Nat. Neur. Eph.* 149, 4, pl. 13, f. 1—3.

Brazil.

Pal. albicans? Fem. — Testaceous, whitish beneath: head darker than the thorax: abdomen pale testaceous, blackish above for three-fourths of the length, less than twice the length of the thorax: setæ white, slender, shorter than the body: legs whitish, short: wings white, slightly opaque; veins whitish, brownish along the fore border of the fore-wing till near the tip. Length of the body 3½ lines; of the setæ 2½ lines; of the wings 12 lines.

a. Brazil. Presented by J. P. G. Smith, Esq.

5. Palingenia dorsalis.

Corpus flavo fuscoque varium; prothorax fusco vittatus; seta caudalis media brevissima sed distincta; alarum venæ violaceo-fuscæ.

Palingenia dorsalis, *Burm. Handb. Ent.* ii. 803, 3. *Pictet, Hist. Nat. Neur. Eph.* 153, 6, pl. 13, f. 5.

Brazil.

6. Palingenia Indica.

Corpus flavo fuscoque varium; prothorax fusco vittatus; seta caudalis media brevissima sed distincta; alarum venæ flavæ.

Palingenia Indica (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 151, 5, pl. 13, f. 4.

East Indies.

7. Palingenia longicauda.

Maxima; seta caudalis media fere obsoleta.

Ephemera longicauda, *Oliv. Enc. Méth. Ins.* vi. 418, 6. *Aug. Clutius, De Hemerobio sive Ephemero*, p. 96, 100. *Swammerd. Bibl. Nat.* i. 234-270, ii. pl. 13—15. *Schæff. Icon. Ins. Ratisb.* pl. 204, f. 3. *Latr. Hist. Nat. Ins.* xiii. 98, 8; *Gen. Cr. et Ins.* iii. 184. *Ramb. Hist. Nat. Neur.* 295, 5.

Ephemera flos-aquæ, *Illig. Mag.* i. 187, 17.

Ephemera Swammerdamia, *Latr. Hist. Nat. Ins.* xiii. 98, 7; *Règne Anim.* v. 244. *Blanch. Cours Hist. Nat.* iii. 54.

Palingenia longicauda, *Burm. Handb. Ent.* ii. 803, 2. *Westw. Intr. Class. Ins.* ii. 33. *Pictet, Hist. Nat. Neur. Eph.* 155, 7, pl. 14, 15.

Germany; France.

8. Palingenia Savignyi.

——— *Descript. de l'Egypte, Neuropt. Savigny*, pl. 2, f. 5.
Palingenia Savignyi, *Pictet, Hist. Nat. Neur. Eph.* 157.

Egypt.

9. Palingenia atrostoma.

Palingenia atrostoma, *Weber, Obs. Entom.* pl. 99, 1. *Pictet, Hist. Nat. Neur. Eph.* 157.

Brazil.

10. Palingenia lata.

Subimago. *Testacea; caput fuscum; thorax fusco bivittatus; abdominis dorsum fuscum; setæ latæ, pilosæ, corpore triplo longiores; alæ fuscæ.*

Male.—Testaceous, rather broad: head mostly brown: thorax with two brown stripes (which are broadest on the prothorax), and with some slight brown streaks: abdomen less than twice the length of the thorax, brown above except on each side: setæ pale testaceous, broad, hairy, thrice the length of the body: wings brown, with about twelve distinct longitudinal veins; transverse veins few and indistinct especially towards the hind border. Length of the body 9 lines; of the setæ 27 lines; of the wings 20 lines.

a, *b*. Silhet. From Mr. Sowerby's collection.

11. Palingenia viridescens, Fem.

Cinereo-fusca, subtus testacea; antennæ nigræ; abdomen apice testaceo bivittatum; setæ testaceæ abdomine breviores; pedes testacei; alæ subcinereæ.

Ephemera viridescens, *Barnston's MSS.*

Grayish brown, testaceous beneath excepting the disk of the pectus: antennæ black: hinder part of the thorax with testaceous borders: abdomen scabrous, more than twice the length of the thorax; the two last segments with a testaceous stripe on each side: setæ testaceous, pubescent, shorter than the abdomen: legs testaceous: wings grayish; veins black, testaceous at the base; longitudinal veins about twelve in number, differing much in structure from those of *P. lata;* transverse veins numerous and distinct: hind-wings with brown hind borders. Length of the body 9 lines; of the setæ 8 lines; of the wings 24 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

12. Palingenia occulta.

Testacea; antennæ nigræ; mesothoracis latera fusca; abdomen fusco bivittatum; setæ corporis longitudine; tarsi et pedes antici subfusci; alæ subcinereæ.

Testaceous: antennæ black, testaceous at the base: mesothorax brown on each side: abdomen darker than the thorax, with two irregular brown stripes: setæ dark testaceous, minutely pubescent, as long as the body: legs testaceous; tarsi and fore-legs brownish: wings grayish; veins black, testaceous at the base: fore-wings pale yellow at the base; fore border slightly tinged with brown. Length of the body 9—11 lines; of the setæ 8 lines; of the wings 18—22 lines.

a—c. Arctic America, between Lake Winipeg and Lake Superior. Presented by Sir John Richardson.

13. Palingenia natata.

Fusco-testacea; antennæ nigræ; abdomen fusco bivittatum; setæ fulvæ, fasciatæ, hirsutissimæ, corpore paullo breviores; pedes testacei, tibiis tarsisque fuscis; alæ subcinereæ, venis nebulosis, anticæ nigro maculatæ.

Ephemera natata, *Barnston, MSS.*

Subimago.—Dull testaceous, slightly shaded with brown: antennæ black: abdomen with two interrupted brown stripes, about thrice the length of the thorax: setæ tawny with darker bands, very hairy, a little shorter than the body: legs dark testaceous; tibiæ and tarsi brown: wings grayish; veins black, clouded with blackish brown except at the tips and along the hind borders: fore-wings with three or four black spots in the disk. Length of the body 9 lines; of the setæ 7 lines; of the wings 18 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

14. Palingenia humeralis.

Testacea; abdomen olivaceo-fuscum, subtus piceo-fuscum; setæ pubescentes; tibiæ anticæ albidæ, alæ subcinereæ, costa basali flava apicali subfusca.

Dull testaceous; abdomen olive-brown above, piceous brown beneath, about twice the length of the thorax: setæ testaceous, pubescent, longer? than the body, composed of very short and numerous joints: legs pale testaceous; fore-tibiæ whitish: wings slightly gray; veins black; fore border of the fore-wings yellow at the base, slightly tinged with brown towards the tip, its intermediate veins clouded with black. Length of the body 4 lines; of the wings 16 lines.

a. New Zealand. Presented by Dr. Sinclair.

15. Palingenia bicolor.

Ferruginea; pectus nigro bimaculatum; abdomen fuscum; setæ testaceæ, pilosæ, abdomine duplo longiores; pedes flavi, antici fusco-testacei, tarsis basi albidis; alæ cinereæ.

Subimago.—Pale ferruginous: pectus with a blackish spot on each side: abdomen brown, paler beneath, full twice the length of the thorax: setæ testaceous, hairy, about the length of the abdomen: legs yellow: fore-legs brownish-testaceous; tarsi whitish towards the base: wings gray, pubescent along the hind borders;

veins black, slightly clouded with brown. Length of the body 5 lines; of the setæ 3 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

16. Palingenia pallipes.

Ferruginea; capitis discus piceus; antennæ nigræ; thoracis latera fulvo maculata; setæ fulvæ, subfasciatæ; pedes testacei, antici ferruginei; alæ limpidæ, anticæ macula stigmaticali sublurida.

Fem. Dark ferruginous, paler beneath: disk of the head piceous: antennæ black: thorax with some tawny spots on each side: abdomen less than twice the length of the thorax: setæ dull tawny, a little darker about the sutures of the joints, a little longer than the body: middle seta short: legs testaceous: fore-legs ferruginous: wings limpid; veins brown, distinct: fore border of the fore-wings with a lurid tinge towards the tip.

Subimago.—Brown: wings gray. Length of the body 4½ lines; of the setæ 7 lines; of the wings 11 lines.

a—c. Nova Scotia. From Lieut. Redman's collection.

17. Palingenia concinna.

Picea, subtus ferrugineo varia; setæ testaceæ, corpore plus duplo longiores; pedes testacei, gracillimi, antici fusci longissimi, femoribus testaceis; alæ limpidæ, costa apicali subfusca.

Male.—Piceous, partly ferruginous beneath: antennæ black: abdomen less than twice the length of the thorax: tentacula luteous: middle seta very short; lateral setæ dull testaceous, more than twice the length of the body: legs testaceous, very slender: fore-legs brown, very long; femora testaceous: wings limpid; veins pale testaceous, darker towards the tips: fore border of the fore-wings pale brown along one-third of the length from the tip. Length of the body 4 lines; of the setæ 12 lines; of the wings 10 lines.

a. Nova Scotia. From Lieut. Redman's collection.

18. Palingenia nebulosa.

Niger; abdomen piceum, subtus fulvum; setæ testaceæ, fusco fasciatæ, corpore plus duplo longiores; pedes fulvi, antici obscuriores longissimi; alæ limpidæ, anticæ fusco fasciatæ.

Male.—Black: abdomen piceous, tawny beneath, nearly twice the length of the thorax: setæ testaceous; middle seta very slender, about half the length of the abdomen; lateral setæ with brownish bands, more than twice the length of the body: legs tawny: fore-legs dark tawny, very long: wings limpid; veins brown: fore-wings with a broad, brown band, which occupies full one-third of the length, and extends nearly to the tip. Length of the body $4\frac{1}{2}$ lines; of the setæ 12 lines; of the wings 9 lines.

a—b. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

19. Palingenia albifilum.

Fulva; caput nigrum; antennæ testaceæ; abdomen testaceum; setæ albæ, corpore triplo longiores; pedes testacei, antici subfusci; alæ limpidæ, venis albis.

Tawny: head mostly black: antennæ testaceous: abdomen testaceous: setæ white, slender, thrice the length of the body: legs testaceous: fore-legs brownish: wings limpid, broad; veins white. Length of the body 4—5 lines; of the setæ 15—18 lines; of the wings 10—13 lines.

Var. Abdomen brownish above: fore-wings with a blackish tinge towards the base: veins of the fore border blackish for one-third of the length from the base.

a, b. Pará. Presented by J. P. G. Smith, Esq.

20. Palingenia latipennis.

Pallide testacea, nonnunquam obscurior; setæ albæ, corpore duplo longiores; pedes albi; alæ subalbæ, sublimpidæ, venis albis.

Subimago.—Pale testaceous: abdomen twice the length of the thorax: setæ white, twice the length of the body: legs white: wings whitish, nearly limpid; veins white. Length of the body 3—3½ lines; of the setæ 7 lines; of the wings 7 lines.

Var. Head piceous above: prothorax with two short brown streaks: disk of the mesothorax tawny.

a—c. Pará. From Mr. Stevens' collection.

21. Palingenia vitrea.

Testacea; femora fusco subnotata; alæ albidæ, subopacæ, venis testaceis.

Ephemera vitrea, *Barnston, MSS.*

Subimago.—Testaceous: abdomen hardly twice the length of the thorax: an indistinct brownish mark on each femur: wings dingy whitish, slightly opaque; veins testaceous. Length of the body 3 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

Genus 4. BAËTIS.

Oculi maris approximati, simplices. Pedes bene determinati. Setæ caudales duæ. Alæ reticulatæ, quatuor, venis plurimis. Larva valde depressa, repens, non subiens, cauda simplici.

Baëtis, *Leach; Steph.; Curt.; Burm.; Pictet.*
Ephemeræ bisetæ, *Zett.*
Baëtidæ, *Newman.*

Eyes simple in both sexes, but much largest in the male where they are generally only separated by a very small interval: wings four, with numerous cross-veins; fore-wings long and narrow; hind-wings almost as long as one-fourth of the fore-wings, with a complete neuration and an angular costal border: abdominal tentacula large and much curved; internal appendages short and quadrate:

two tail-bristles of equal length, without any rudiment of the median bristle.

1. Baetis fluminum.

Corpus fulvum, fusco maculatum; caput mediocre; oculi maris approximati; pedes immaculati, aut vix maculati; alæ hyalinæ, aut basi subtinctæ, areola costali pallida invaria.

Baëtis fluminum, *Pictet, Hist. Nat. Neur. Eph.* 164, 1, pl. 16—19.
Allied to Ephemera —— *Schæff. Icon. Ins. Ratisb.* pl. 229, 2, 3, *and* 232, 4, 5.

a, *b*. England. Presented by F. Walker, Esq.
c—*e*. England.

2. Baetis venosa.

Pallide castanea; oculi nigri; abdominis latera lineis obliquis valde distinctis notata, marginibus fuscis; alæ hyalinæ, areola costali basi hyalina apice colorata.

Baëtis venosa, *Burm. Handb. Ent.* ii. 801, 6. *Steph. Ill. Brit. Ent. Mand.* vi. 63, 2. *Pictet, Hist. Nat. Neur. Eph.* 167, 2, pl. 20, f. 1.
Ephemera venosa, *Fabr. Ent. Syst.* ii. 70, 8. *Deg. Ins.* ii. 652, 4, pl. 18, f. 1—4. *Oliv. Enc. Méth.* 418, 8. *Latr. Hist. Nat. Ins.* xiii. 97, 10. *Zett. Ins. Lapp.* 1045, 7.
Ephemera nervosa, *Fabr. Sp. Ins.* i. 384, 6. *De Vill. Linn. Ent.* iii. 22, 14.
Baëtis dispar? *Curt. Brit. Ent.* xi. pl. 484. *Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 63, 1.

a, *b*. England.

3. Baetis cyanops.

Corpus angustum, fulvum; oculi cyanei; alæ hyalinæ, aut basi subtinctæ, areola costali basi hyalina apice colorata.

——— *Schæff. Icon. Ins. Ratisb.* 229, 2, 3, 239, 4, 5.
Baëtis cyanops, *Pictet, Hist. Nat. Neur. Eph.* 171, 3, pl. 20, f. 2.
Switzerland.

4. Baetis montana.

Oculi cyanei; thorax niger; abdomen viridescens, innotatum; alæ hyalinæ, aut basi subtinctæ, areola costali basi hyalina apice colorata.

Baëtis montana, *Pictet, Hist. Nat. Neur. Eph.* 172, 4, pl. 20, f. 3.

a, b.? England. Presented by F. Walker, Esq.

5. Baetis purpurascens.

Oculi cinerei; thorax et abdomen pallide violacea; alæ hyalinæ, aut basi subtinctæ, areola costali basi hyalina apice colorata.

Baëtis purpurascens, *Pictet, Hist. Nat. Neur. Eph.* 174, 5, pl. 20, f. 4.

Switzerland.

6. Baetis lateralis.

Corpus fulvum, fusco maculatum; caput maximum; oculi maris remoti; pedes immaculati aut vix maculati; alæ hyalinæ aut basi subtinctæ, areola costali pallida invaria.

Baëtis lateralis, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 65, 8. *Pictet, Hist. Nat. Neur. Eph.* 175, 6, pl. 21.

a. England. Presented by F. Walker, Esq.

7. Baetis semicolorata.

Femora anteriora fusca; alæ dimidio basali valde colorata, areola costali immaculata.

Baëtis semicolorata, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 64, 7. *Pictet, Hist. Nat. Neur. Eph.* 7.

Europe.

8. Baetis semitincta.

Femora anteriora fulva; alæ dimidio basali mediocriter colorata, areola costali immaculata.

Baëtis semitincta, *Pictet*, *Hist. Nat. Neur. Eph.* 180, 8, pl. 22, f. 1—3.

Switzerland.

9. Baetis obscura.

Corpus omnino nigrum; alæ hyalinæ; areola costalis invaria.

Baëtis obscura, *Steph. Ill. Brit. Ent. Mand.* vi. 65, 9. *Pictet*, *Hist. Nat. Neur. Eph.* 182, 9, pl. 23, f. 1.

a? England. Presented by F. Walker, Esq.

10. Baetis cerea.

Corpus omnino fulvum vel flavum; alæ hyalinæ aut basi subtinctæ, areola costali immaculata, venis transversis fulvis indistinctis.

Baëtis cerea, *Pictet*, *Hist. Nat. Neur. Eph.* 183, 10, pl. 23, f. 2.

a. England. Presented by F. Walker, Esq.
b. England

11. Baetis sulphurea.

Corpus latum, stramineum; oculi virides; alæ hyalinæ aut basi subtinctæ, areola costali basi hyalina apice colorata.

Baëtis sulphurea, *Pictet*, *Hist. Nat. Neur. Eph.* 185, 11, pl. 23, f. 3.
Ephemera sulphurea, *Müller*, *Zool. Dan. Prodr.* 142, 1645.
Ephemera helvola? *Sulz. Abg. Gesch.* pl. 24, f. 7. *Roemer*, *Gen.* pl. 24.
Baëtis straminea? *Curt. Phil. Mag.* 1834, 121.

Europe.

12. Baetis flaveola.

Corpus omnino fulvum vel flavum ; alæ hyalinæ aut basi subtinctæ, areola costali immaculata, venis transversis nigricantibus optime determinatis.

Baëtis flaveola, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 186, 12, pl. 23, f. 4.

B. flaveola ?—Pale testaceous : antennæ darker : abdomen pale luteous, with narrow blackish bands on the sutures of the segments, about twice the length of the thorax : setæ whitish, very minutely pubescent, without bands, more than twice the length of the body : legs whitish, slender : fore-legs long ; femora with a brownish spot in the middle and another at the tip : wings limpid ; veins brownish, partly pale, not strongly marked.

Subimago.—Paler : setæ shorter : wings slightly opaque, pubescent along the hind border ; veins pale or brown. Length of the body 2½ lines ; of the setæ 8 lines ; of the wings 9 lines.

a—c. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr Barnston.

13. Baetis guttata.

Corpus fulvum, fusco maculatum ; pedes distinctissime maculati ; alæ hyalinæ aut basi subtinctæ ; areola costalis fuscescens invaria.

Baëtis guttata, *Pictet, Hist. Nat. Neur. Eph.* 187, 13, pl. 24, f. 3.

Switzerland.

14. Baetis Australasica.

Areola costalis venis transversis nigro maculatis.

Baëtis Australasica, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 189, 14, pl. 24, f. 1.

New Holland.

15. Baetis aurantiaca.

Rufo-testacea ; segmentis abdominalibus utrinque linea obliqua nigra ; alæ graciles, hyalinæ. Long. $3\frac{1}{2}$ lin.

Baëtis aurantiaca, *Burm. Handb. Ent.* ii. 801, 4. *Pictet, Hist. Nat. Neur. Eph.* 191.

Germany.

16. Baetis longicauda.

Ochraceo-lutea ; pedibus pallidioribus ; setis longissimis ; geniculis abdominisque segmentorum marginibus fuscis.

Baëtis longicauda, *Steph. Ill. Brit. Ent. Mand.* vi. 63, 3. *Pictet, Hist. Nat. Neur. Eph.* 193.
Baëtis mellea, *Curt. Phil. Mag.* 1834, 121.

England.

17. Baetis elegans.

Ochraceo-flava ; abdomine pallide subcastaneo ; tarsorum articulis apice nigris ; alis subflavescentibus, costa saturatiore.

Baëtis elegans, *Curt. Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 64, 6. *Pictet, Hist. Nat. Neur. Eph.* 193.

a. England. Presented by F. Walker, Esq.

18. Baetis carnea.

Incarnata ; abdomine saturatiore ; setis immaculatis ; alis elongatis, hyalinis, costa subrosea, venis subfuscis.

Baëtis carnea, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 65, 10. *Pictet, Hist. Nat. Neur. Eph.* 193.

England.

19. Baetis flavescens.

B. stramineæ *similis sed minor.*

Baëtis flavescens, *Curt. Phil. Mag.* 1834, 121. *Pictet, Hist. Nat. Neur. Eph.* 193.
Baëtis straminea, var?

England.

20. Baetis costalis.

Pallide castanea; thoracis lateribus, abdominis apice et pedibus ochraceis; alis hyalinis, costa flavescente.

Baëtis costalis, *Curt. Phil. Mag.* 1834, 120. *Steph. Ill. Brit. Ent. Mand.* vi. 64, 4. *Pictet, Hist. Nat. Neur. Eph.* 194.

England.

21. Baetis subfusca.

Obscure castanea; abdomine fuscescente, segmentorum marginibus saturatioribus; alis subflavescentibus, costa concolore, stigmate subochraceo.

Baëtis subfusca, *Steph. Ill. Brit. Ent. Mand.* vi. 64, 5. *Pictet, Hist. Nat. Neur. Eph.* 194.

England.

22. Baetis? reticulata.

Fusca; thoracis vittis, abdominis cingulis femoribusque pallidioribus; alæ cinereæ, venis omnibus late fuscis. Long. 3½ lin.

Baëtis reticulata, *Burm. Handb. Ent.* ii. 2, 801, 5.
" Baët's fluminum et Potamanthi vespertini subimagines confusæ ?" *Pictet.*

Germany.

23. Baetis interpunctata.

Albida; caput viridescens; abdominis segmenta marginibus posticis nigris.

Baëtis interpunctata, *Say*, *Journ. Acad. Nat. Sci. Phil.* viii. 41, 1.

Yellowish white, tinged with green: head rather prominent, yellow-green; vertex with a lateral black point: eyes with a longitudinal black line: ocelli distant, each with a black orbit; anterior one less than half the size of the others: front with a black angular line under the antennæ: seta of the antennæ black: prothorax with a black line on each side: thorax somewhat brownish: abdomen with the hind borders of the segments black: setæ immaculate: legs greenish; anterior femora with two blackish bands; hind pair with dusky tips: wings greenish on the fore border, with black transverse veins, and a distinct black abbreviated longitudinal line on the middle, between the third and fourth veins; the small black spot on the middle of the costal border is very obvious: tip of the abdomen more or less ferruginous. Length nearly three-tenths of an inch.

Indiana.

24. Baetis arida.

Fuscescens; pedes posteriores et setæ alba.

Baëtis arida, *Say*, *Journ. Acad. Nat. Sci. Phil.* viii. 42, 2.

Reddish brown, with dusky incisures: head rather prominent, whitish, varied with ferruginous; vertex with a small black spot on each side of the orbit: eyes rufous, with a whitish vitta: ocelli prominent, approximate; anterior one nearly as large as the others: fore-tibiæ whitish, obscure at each end; posterior legs and setæ greenish white. Length $\frac{2}{3}$ths of an inch.

Indiana.

25. Baetis verticis.

Flavido-alba; caput ferrugineum; thorax ferrugineo bivittatus.

Baëtis verticis, *Say*, *Journ. Acad. Nat. Sci. Phil.* viii. 42, 3.

Yellowish white: head sessile; vertex ferruginous: thorax with two ferruginous vittæ, confluent before and becoming obsolete behind: setæ with black rings, hardly longer than the body: legs white; fore-femora ferruginous at the tips; tips of the fore-tibiæ and of the joints of the fore-tarsi brown: veins of the wings except those of the margin, black; hind-wings not extending beyond the fourth abdominal segment. Length more than $\frac{1}{4}$ of an inch.

Indiana.

26. Baetis obesa.

Brevis; alæ nigricantes, maculis una magna plurimisque parvis hyalinis.

Baëtis obesa, *Say, Journ. Acad. Nat. Sci. Phil.* viii. 43, 4.

Subimago.—Very short and robust, blackish livid: borders of the abdominal segments dull rufous, livid: setæ very short, hairy, with black rings: legs pale yellowish; tips of the joints of the tarsi black: wings dark brown or blackish, with numerous small, transverse, hyaline spots or abbreviated lines, and a large, hyaline, very oblique semifascia about the middle on the anal half: hind-wings with numerous transverse abbreviated hyaline lines, which do not extend to the apical margin. Length over $\frac{3}{10}$ths of an inch.

Indiana.

27. Baetis luridipennis.

Fusca; abdomine cingulato; alis luridis fusco venosis. Long. mar. 7 lin.; fœm. $9\frac{1}{4}$ lin.

Baëtis luridipennis, *Burm. Handb. Ent.* ii. 2, 801, 7. *Pictet, Hist. Nat. Neur. Eph.* 192.

North America.

B. luridipennis? Male.—Tawny: antennæ brown, tawny at the base: abdomen with brownish bands on the sutures of the segments, less than twice the length of the thorax: setæ whitish, very minutely pubescent, a little more than twice the length of the body:

legs whitish, rather stout; a pale brownish band on the middle and another at the tip of each femur: fore-legs long: wings limpid; veins tawny: fore border of the fore-wing with a slight tawny tinge towards the tip. Length of the body 4 lines; of the setæ 12 lines; of the wings 12 lines.

a. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

28. Baetis angulata, Mas.

Ferruginea, testaceo varia; abdominis discum piceum; setæ fuscæ, testaceo annulatæ, corpore plus duplo longiores; pedes testacei, antici picei; alæ limpidæ, anticæ ad costam fuscæ, posticæ fusco submarginatæ.

Male.—Ferruginous, partly testaceous beneath: disk of the head tawny in front: mesothorax and metathorax testaceous: abdomen less than twice the length of the thorax; disk above piceous: setæ brown with distinct testaceous bands, more than twice the length of the body: legs testaceous: fore-legs piceous: wings limpid; veins black; transverse veins numerous and strongly marked: fore border of the fore-wings brown: hind-wings slightly tinged with brown along the hind border. Length of the body 9 lines; of the setæ 23 lines; of the wings 20 lines.

a. Canada. Presented by Dr. Barnston.

29. Baetis remota.

Picea, ferrugineo varia; setæ testaceæ, corpore multo longiores; pedes testacei, antici picei longissimi; alæ limpidæ, anticæ longæ, costa basi lurida apice fusca.

Piceous, partly ferruginous on each side and beneath: setæ dull testaceous, much longer than the body: legs testaceous, slender: fore-legs piceous, very long: wings limpid; veins black: fore-wings long, with an indistinct tinge on the fore border, which is lurid at the base and brown towards the tip. Length of the wings 16 lines.

a. New Zealand. Presented by Dr. Sinclair.

30. Baetis vicaria, Mas.

Ferruginea; antennæ nigræ; thoracis latera flavo notata; abdomen fusco fasciatum; setæ testaceæ, subannulatæ, corpore plus duplo longiores; pedes testacei, femoribus nigro bifasciatis; alæ hyalinæ, anticæ venis costalibus et discalibus fusco nebulosis.

Male.—Ferruginous: antennæ black: thorax with pale yellow marks on each side: abdomen hardly twice the length of the thorax; a brown band on each segment: setæ dull testaceous, darker on the sutures of the joints, more than twice the length of the body: legs testaceous, slender; a broad brown band on the middle, and a narrower one on the tip of each femur: fore-legs longer and darker: wings hyaline; veins of the fore-wings brown, indistinctly clouded along the fore border, and in the disk: fore border pale brown for one-third of the length from the tip. Length of the body 6 lines; of the setæ 15 lines; of the wings 15 lines.

a. North America? Presented by the Entomological Club.

31. Baetis basalis, Mas.

Nigro-picea, longa, gracilis; abdomen testaceo fasciatum; setæ albidæ, nigro annulatæ, corpore fere duplo longiores; alæ anticæ limpidæ, venis costalibus fusco nebulosis, posticæ fuscæ apice limpidæ.

Pitchy black, long, slender: abdomen with dull testaceous bands on the sutures of the segments, more than twice the length of the thorax: tentacula whitish: setæ whitish with blackish bands on the sutures of the joints, nearly twice the length of the body: fore-wings limpid; veins brown, clouded along the fore border with black, which forms a spot about the middle of the costa: hind-wings brown, limpid towards the tips. Length of the body 6 lines; of the setæ 11 lines; of the wings 14 lines.

a. Lake Winipeg. Presented by Sir John Richardson.

32. Baetis tessellata.

Albido-testacea, sat lata, fusco notata; abdomen supra fuscum; setæ testaceæ, corpore fere duplo longiores; pedes testacei, femoribus nigro fasciatis, tarsis fuscis; alæ subcinereæ, venis testaceis fusco nebulosis.

Subimago.—Whitish testaceous, rather broad, marked here and there with brown: antennæ brown, testaceous at the base: abdomen brown above, less than twice the length of the thorax: setæ testaceous, without bands, nearly twice the length of the body: legs testaceous, rather long; femora with a blackish band on each; tarsi brown: wings grayish; veins testaceous, clouded with black. Length of the body 5 lines; of the setæ 9 lines; of the wings 14 lines.

a. Nova Scotia. From Lieut. Redman's collection.

33. Baetis albivitta.

Nigra, gracilis, albo vittata, subtus ferruginea; setæ fuscæ, testaceo annulatæ, corpore duplo longiores; pedes testacei, tibiis tarsisque anticis nigris; alæ subluridæ, anticæ costa saturate lurida, posticæ venis fusco nebulosis.

Black, slender, with a white dorsal stripe extending along the whole length of the body, and having a testaceous tinge on the head; under side ferruginous: setæ twice the length of the body, brown with testaceous bands: legs testaceous; fore-tibiæ and fore-tarsi black: wings with a slight lurid tinge; veins black: fore-wings deeply lurid along the fore border: veins of the hind-wings clouded with brown. Length of the body 8 lines; of the setæ 16 lines; of the wings 13 lines.

a. Pará. Presented by Gordon Graham, Esq.
b. Brazil From Mr. Stevens' collection.

34. Baetis annulata, Mas.

Ferruginea, subtus testacea; thorax testaceo bivittatus; abdominis latera testaceo maculata; setæ albidæ, nigro annulatæ; pedes albidi fasciis nigricantibus, antici longissimi; alæ hyalinæ.

Male.—Ferruginous, testaceous beneath: eyes very large, connected: antennæ brown, ferruginous at the base: thorax with two testaceous stripes: abdomen rather less than twice the length of the thorax; each segment with a triangular testaceous spot on each side: setæ whitish, mutilated, with black bands on the sutures of the joints: legs whitish, with blackish bands: fore-legs very long: wings hyaline; veins blackish, very slender, but distinct. Length of the body 5 lines; of the wings 13 lines.

a. Trenton Falls, New York. Presented by the Entomological Club.

35. Baetis Taprobanes, Mas.

Nigra; thoracis latera ferrugineo notata; abdominis latera testaceo maculata; setæ piceæ, corpore plus duplo longiores; pedes picei; alæ hyalinæ, anticæ basi fuscæ.

Male.—Black: thorax with some ferruginous marks on each side: abdomen twice the length of the thorax; each segment with a triangular testaceous spot on each side of the fore border: setæ piceous, much more than twice the length of the body: legs piceous: wings hyaline; veins black; transverse veins numerous and distinct: fore-wings brown at the base; fore border pale brown for one-third of the length from the tip. Length of the body 5 lines; of the setæ 14 lines; of the wings 13 lines.

a. Ceylon. Presented by R. Templeton, Esq.

36. Baetis? determinata, Mas.

Picea, flavo vittata, subtus testacea; caput flavo varium; abdominis vitta piceo notata; pedes testacei, femoribus ferrugineo fasciatis, tarsis apice ferrugineis; alæ limpidæ, costa fusca striga basali flava.

Male.—Piceous, testaceous beneath: head yellow about the eyes: antennæ black: thorax with a yellow stripe which has a luteous tinge on the metathorax: abdomen hardly twice the length of the thorax, with a broad yellow stripe which contains some piceous marks: legs testaceous; a broad ferruginous band on each femur; tarsi ferruginous towards the tips: fore-legs long: wings quite limpid: veins black; transverse veins very numerous and strongly marked: fore border of the fore-wings dark brown, with a yellow streak in the front towards the base. Length of the body 5 lines; of the wings 11 lines.

a. Java. From Mr. Argent's collection.

37. Baetis invaria, Mas.

Ferruginea, subtus fulva; antennæ nigræ, basi ferrugineæ; pedes testacei, antici longi; alæ limpidæ, venis testaceis transversis albidis.

Male.—Pale ferruginous, tawny beneath: antennæ black, ferruginous at the base: abdomen hardly twice the length of the thorax: legs testaceous; fore-legs long: wings limpid; veins pale testaceous, indistinct; transverse veins whitish, very indistinct. Length of the body $2\frac{1}{2}$—3 lines; of the wings 7—9 lines.

a—*c*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

38. Baetis fusca.

Picea, subtus ferruginea; abdomen ferrugineum, subtus fulvum; setæ testaceæ, fusco subannulatæ, corpore plus duplo longiores; pedes testacei, antici fusci; alæ hyalinæ, venis testaceis, anticæ costa apicali fusca.

Piceous, ferruginous beneath: antennæ black: abdomen ferruginous, tawny beneath, hardly twice the length of the thorax: setæ dull testaceous, more than twice the length of the body, with pale brownish bands on the sutures of the joints: legs testaceous; fore-legs brown: wings hyaline; veins testaceous; fore border of the fore-wings pale brown for one-third of the length from the tip.

Length of the body 4 lines; of the setæ 12 lines; of the wings 9 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.
c. Nova Scotia. From Lieut. Redman's collection.

39. Baetis debilis.

Ferruginea; setæ testaceæ, corpore longiores; pedes testacei; alæ sublimpidæ, venis testaceis.

Fem.—Ferruginous: abdomen darker than the thorax and twice its length; setæ testaceous, longer than the body: legs pale testaceous: wings nearly limpid; veins pale testaceous, distinct. Length of the body 3 lines; of the setæ 4 lines; of the wings 8½ lines.

a. Nova Scotia. From Lieut. Redman's collection.

40. Baetis Canadensis.

Testacea; capitis vertex thoracisque discus ferruginei; abdomen piceo fasciatum; pedes pallidi; femorum fasciis tarsisque nigricantibus; alæ limpidæ, costa apicali fusca. Var.? *Flava; caput supra piceum; thorax antice piceo bivittatus, apud discum ferrugineus; abdomen ferrugineo fasciatum; setæ fusco subannulatæ, corpore paullo plus duplo longiores; femora fasciis duabus nigricantibus; alæ anticæ costa apicali subflava.*

Male.—Pale testaceous: head ferruginous above: disk of the thorax ferruginous: abdomen rather less than twice the length of the thorax; borders of the segments piceous: legs pale testaceous; bands of the femora and tarsi blackish: wings limpid; veins black, very distinct: fore border of the fore-wings brown along one-third of the length from the tip. Length of the body 3 lines; of the wings 8 lines.

a. Canada. Presented by Dr. Barnston.

Var.? Pale yellow: head piceous above: thorax with two piceous stripes in front; disk mostly ferruginous: hind borders of the abdominal segments mostly ferruginous: setæ rather more than twice the length of the body; sutures of the joints brownish: femora with two blackish bands: fore border of the fore-wings with a pale yellow tinge, brown for one-third of the length from the tip. Length of the body 4 lines; of the setæ 9 lines; of the wings 10 lines.

a. ——— ?

41. Baetis fuscata.

Picea, subtus ferruginea; thoracis latera luteo maculata; pedes ferruginei, antici picei; alæ limpidæ, venis pallidis. Subimago? *Testacea; setæ corpore longiores; alæ cinereæ.*

Ephemera fuscata, *Barnston, MSS.*

Piceous, ferruginous beneath: antennæ black: thorax with some luteous spots on each side: abdomen less than twice the length of the thorax: legs ferruginous; fore-legs piceous: wings limpid; veins pale, slender; transverse veins indistinct. Subimago?—Dull testaceous: setæ pale testaceous, longer than the body: wings gray; hind borders ciliated. Length of the body 2—2½ lines; of the wings 6—8 lines.

a, *b*. St. Martin's Falls, Albany River, Hudson's Bay. Presented by Dr. Barnston.

42. Baetis scita.

Nigro-picea, gracilis; setæ albidæ, nigro annulatæ, corpore multo longiores; pedes testacei, longi, graciles, femoribus tibiis et tarsorum articulis apice nigris; alæ limpidæ, venis nigris, costa venis nigro nebulosis basi nigro-fusca.

Piceous black, slender: setæ whitish with numerous black rings, much longer than the body: legs pale testaceous, long and slender; tips of the femora, of the tibiæ and of the joints of the tarsi black; a blackish band on each femur: wings quite limpid; veins black, very slender: fore border of the fore-wings blackish-

brown at the base; its veins stout, clouded with black. Length of the body 2½ lines; of the setæ 4 lines; of the wings 6½ lines.

a, *b*. New Zealand. Presented by Dr. Sinclair.

43. Baetis? torrida.

Ferruginea; caput piceum; thoracis latera testacea; pedes testacei, validi, femoribus apice pedibusque anticis piceis; alæ subluridæ, anticæ costa fusca.

Ferruginous, paler beneath: head piceous: sides of the thorax testaceous: abdomen mutilated: legs testaceous, stout; tips of the femora and fore-legs piceous: wings with a slight lurid tinge; veins black, distinct; fore border of the fore-wings brown. Length of the body 4 lines? of the wings 10 lines?

a. Philippine Isles. From Mr. Wood's collection.

44. Baetis? ignota, Mas.

Picea; abdomen subtus ferrugineum; setæ testaceæ; pedes flavi, antici picei; alæ limpidæ, venis albis.

Male.—Piceous: abdomen twice the length of the thorax, ferruginous beneath: setæ testaceous, mutilated: legs entirely pale yellow; fore-legs piceous: wings wholly limpid, with no stigma or tinge along the fore border; veins white. Length of the body 4½ lines; of the wings 12 lines.

a. ———?

45. Baetis? ———, Subimago.

Ephemera angustipennis, *Ramb. Hist. Nat. Ins. Neur.* 295, 6.

Fem.—Size of *Cloeon Diptera:* head with the eyes broader than the chest: eyes very prominent exteriorly, very far apart: ocelli almost on the same line: thorax rather dark red: abdomen reddish-gray, pale, with two rather thick filaments: legs dull reddish; tarsi 5-jointed: wings grayish: fore-wings narrow at the base, their veinlets with slightly brownish borders.

Madrid.

Genus 5. CLOËON.

Oculi maris duplices. Pedes bene determinati. Setæ caudales duæ. Alæ quatuor, venis transversis paucis. Larva natans, non subiens, cauda valde ciliata.

Ephemera, *Linn.*; *De Vill.*; *Fabr.*; *Gmel.*; *Oliv.*; *Schr.*; *Walkn.*; *Latr.*; *Stew.*; *Turt.*; *Guér.*; *Zett.*; *Blanch.*
Cloëon, *Leach*; *Steph.*; *Curt.*
Cloë, *Burm. Handb. Ent.* ii. 2; *Pictet*; *Ramb.*
Baëtis, p., *Steph.*
Oxycypha, p., *Burm.*

Each of the ordinary eyes of the male surmounted by a great reticulated eye in the form of a turban, that is supported on an obconical ring at whose base is the ordinary eye: wings two or four; fore-wings having only very few cross-veins which generally form two crooked lines: lower wings, when they exist, rudimentary, and with a more or less incomplete neuration: abdominal tentacula rather large; internal appendages short, conical: two tail-bristles with a very little rudiment of the median one.

A. Alæ quatuor.

1. Cloeon bioculata.

Maris oculi obscuri; mesothorax flavus unicolor; abdomen basi apiceque obscurum, apud medium pallidius; alæ non fasciatæ nec maculatæ.

Ephemera bioculata, *Linn. Hist. Nat. Ed.* 12, ii. 906, 5. *De Vill. Linn. Ent.* iii. 18, 7. *Oliv. Enc. Méth.* vi. 419, 10. *Fabr. Ent. Syst.* ii. 70, 9. *Gmel. Ed. Syst. Nat.* i. 2629, 5. *Barbut, Gen.* pl. 11, fig. inf. sinist.? *Stew. El. Nat. Hist.* ii. 211. *Turt. Syst. Nat.* iii. 394. *Walkn. Faun. Par.* ii. 9, 6. *Panz. Faun.* xciv. fig. 17. *Latr. Hist. Nat. Ins.* xiii. 97? *Guér. Icon. Règne Anim. Ins. Pl.* 60. *Zett. Ins. Lapp.* 1044, 9. *Blanch. Hist. Nat. Ins.* iii. 54, 6.

Baëtis bioculata, *Steph. Ill. Brit. Ent. Mand.* vi. 65, 12.
Cloë bioculata, *Pictet, Hist. Nat. Neur. Eph.* 244, pl. 34, 35.

a—d. England. Presented by F. Walker, Esq.
e—f. England.
g. St. Martin's Falls, Albany River, Hudson's Bay. Presented by F. Walker, Esq.

2. Cloeon Rhodani.

Maris oculi obscuri; mesothorax fuscus vel niger, nonnunquam albo lineatus; abdomen basi apiceque obscurum, apud medium pallidius; setæ caudales fusco maculatæ; pedes anteriores fusci vel fusco maculati; alæ non fasciatæ nec maculatæ.

Cloë Rhodani, *Pictet, Hist. Nat. Neur. Eph.* 248, 2, pl. 36—39.
Switzerland.

3. Cloeon fuscata.

Oculi fusci; mesothorax omnino niger; abdomen basi apiceque obscurum, medio pallidius; setæ caudales albæ; pedes albi, non maculati; alæ non fasciatæ nec maculatæ, posticæ mediocres.

Ephemera fuscata, *Linn. Syst. Nat. Ed.* 12, ii. 907, 6. *De Vill. Linn. Ent.* iii. 19, 8. *Oliv. Enc. Méth.* vi. 419, 9. *Fabr. Ent. Syst.* ii. 70, 11. *Gmel. Ed. Syst. Nat.* i. 2629, 6. *Walkn. Faun. Par.* ii. 9, 8. *Schr. Faun. Boic.* 1946. *Turt. Syst. Nat.* iii. 394. *Latr. Hist. Nat. Ins.* xiii. 97, 11.
Baëtis fuscata, *Steph. Ill. Brit. Ent. Mand.* vi. 62, 13.
Cloë fuscata, *Pictet, Hist. Nat. Neur. Eph.* 251, 3, pl. 40, f. 1.

Europe.

4. Cloeon pumila.

Oculi fusci; mesothorax omnino niger; abdomen basi apiceque obscurum, medio pallidius; setæ caudales albæ; pedes albi, anteriores suturis fuscis; alæ non fasciatæ nec maculatæ, posticæ parvæ.

Ephemera parvula? *Scop. Ent. Carn.* 264, 687.
Cloë pumila, *Burm. Handb. Ent.* ii. 2, 799, 4. *Pictet, Hist. Nat. Neur. Eph.* 253, 4, pl. 40, f. 2. *Ramb. Hist. Nat. Ins. Neur.* 298, 5.

a.? England. Presented by F. Walker, Esq.

5. Cloeon translucida.

Oculi rufi; mesothorax fuscus, albo lineatus; abdomen basi apiceque obscurum, medio pallidius; setæ caudales albæ; pedes albi; alæ non fasciatæ nec maculatæ.

Cloë translucida, *Pictet, Hist. Nat. Neur. Eph.* 255, 5, pl. 40, f. 3, 4.

a, *b*. England.

6. Cloeon alpina.

Oculi maris obscuri; mesothorax lineis nullis aut pallidis; abdomen unicolor, transverse lineatum; setæ caudales fuscæ; alæ non fasciatæ nec maculatæ.

Cloë alpina, *Pictet, Hist. Nat. Neur. Eph.* 257, 6, pl. 40, f. 5.
Switzerland.

7. Cloeon melanonyx.

Oculi maris obscuri; mesothorax lineis nullis aut pallidis; abdomen fuscum invarium; setæ caudales flavæ, maculatæ; alæ non fasciatæ nec maculatæ.

Cloë melanonyx, *Pictet, Hist. Nat. Neur. Eph.* 258, 7, pl. 40, f. 6.
Switzerland.

8. Cloeon litura.

Oculi maris flavi; mesothorax fuscus, nigro vittatus; alæ non fasciatæ nec maculatæ.

Cloë litura, *Pictet, Hist. Nat. Neur. Eph.* 260, 8, pl. 4, f. 1—3.
Switzerland.

9. Cloeon fasciata.

Alæ distinctissime fasciatæ.

Cloë fasciata (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 262, 9, pl. 41, f. 4.

Brazil.

10. Cloeon undata.

Alæ quatuor maculis nebulosis.

Cloë undata, *Pictet, Hist. Nat. Neur. Eph.* 264, 10, pl. 41, f. 6.

Switzerland.

B. Alæ duæ.

11. Cloeon diptera.

Pallide rufescente-cinerea, segmentorum marginibus fuscescentibus; setis fusco punctatis; alis hyalinis, costa flavescente-fusco, albo marmorata, posticis nullis.

Ephemera diptera, *Linn. Syst. Nat. Ed.* 12, ii. 907, 11. *Gmel. Ed. Syst. Nat.* i. 5, 2630, 11. *Deg. Ins.* ii. 2, 650, 5, pl. 18, f. 5—7, fem., 8—10 mas. *Retz, Gen. Deg.* 57, 184. *Schrank, Faun. Boic.* 1947. *De Vill. Linn. Ent.* iii. 22, 21. *Rossi, Faun. Etrusc.* 677. *Oliv. Enc. Méth.* vi. 420, 16. *Fabr. Ent. Syst.* ii. 71, 16. *Latr. Hist. Nat. Crust. et Ins.* xiii. 99, 19. *Shaw, Gen. Zool.* vi. 253. *Zett. Ins. Lapp.* 1046. *Blanch. Hist. Nat. Ins.* iii. 54, 11.

Ephemera annulata, *Müll. Zool. Dan. Prodr.* 143, 1652, fem.

Ephemera striata? *Müll. Zool. Dan. Prodr.* 143, 1651, mas?

Cloëon pallida, *Leach, Edin. Encycl.* ix. 137.

Cloëon marmoratum, *Curt. Phil. Mag.* 1834, 121.

Cloëon obscurum, *Curt. Phil. Mag.* 1834, 121, Subimago.

Cloëon unicolor? *Curt. Phil. Mag.* 1834.

Cloëon dipterum, *Steph. Ill. Brit. Ent. Mand.* vi. 67, 1.

Cloë diptera, *Burm. Handb. Ent.* ii. 2, 798, 1. *Pictet, Hist. Nat. Neur. Eph.* 266, 11, pl. 42.
Cloë affinis, *Ramb. Hist. Nat. Ins. Neur.* 298, 4.

a—c. England. Presented by F. Walker, Esq.
d—f. England.

12. Cloeon horaria.

Fusca; abdomine cinerascente, segmentorum marginibus albis; pedibus pallidis; alis hyalinis, costa nigricante.

Ephemera horaria, *Linn. Syst. Nat. Ed.* 12, ii. 907, 9; *Faun. Suec.* 1476. *Fabr. Ent. Syst.* ii. 71, 13. *Gmel. Ed. Syst. Nat.* i. 5. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 211. *Turt. Syst. Nat.* iii. 394.
Baëtis horaria, *Steph. Ill. Brit. Ent. Mand.* vi. 66, 15.
Cloë horaria, *Pictet, Hist. Nat. Neur. Eph.* 270. *Ramb. Hist. Nat. Ins. Neur.* 299, 7.

Europe.

13. Cloeon culiciformis.

Nigricans; abdomine fusco; pedibus pallidis; alis immaculatis.

Ephemera culiciformis, *Linn. Syst. Nat. Ed.* 12, ii. 907, 8. *Geoffr. Berk. Syn.* i. 150. *Stew. El.* ii. 211. *Turt. Syst. Nat.* iii. 394.
Baëtis culiciformis, *Steph. Ill. Brit. Ent. Mand.* vi. 66, 14.
Cloë culiciformis, *Pictet, Hist. Nat. Neur. Eph.* 270.

a. England.

14. Cloeon striata.

Fusca; abdomine maris albo pellucido, fœminæ opaco rufescente; alis hyalinis, venis subfuscis.

Ephemera striata, *Linn. Syst. Nat. Ed.* 12, ii. 907, 10. *Berk. Syn.* i. 150. *Stew. El. Nat. Hist.* ii. 212. *Turt. Syst. Nat.* iii. 394.
Baëtis striata, *Steph. Ill. Brit. Ent. Mand.* vi. 65, 11.
Cloë striata, *Pictet, Hist. Nat. Neur. Eph.* 270.

a—d. England.

15. Cloeon discolor, Fem.

Cinerea, subtus pallida; filamenta longius pilosa; alæ infuscatæ, ciliatæ, costa obscuriori. Long. 2½ lin.

Onycypha discolor, *Burm. Handb. Ent.* ii. 2, 797, 3.
Cloë obscura? *Ramb. Hist. Nat. Ins. Neur.* 297, 1.

Cape.

16. Cloeon halterata, Mas.

Pallida; oculi medii maximi rubri; abdomen apice ochraceum; filamenta alba, subcingulata. Long. 2½ lin.

Ephemera halterata, *Fabr. Ent. Syst.* ii. 69, 6. *Deg. Ins.* ii. 2, 27, pl. 17, f. 17, 18.
Cloë halterata, *Burm. Handb. Ent.* ii. 2, 798, 3. *Ramb. Hist. Nat. Ins. Neur.* 299, 6.

Europe.

Var.?

Cloë brunnea, *Ramb. Hist. Nat. Ins. Neur.* 298, 3.

Larger than *C. obscura*, Ramb.: body dull reddish, with paler legs: appendages of the male short, slightly diverging, not opposed, their tips short, somewhat pointed: wings brownish, fringed; second vein rather deeply bent after the middle.

South Spain.

Var.?

Cloë subinfuscata, *Ramb. Hist. Nat. Ins. Neur.* 298, 2.

Much larger than *C. obscura*, Ramb., which in other respects it just resembles: veins of wings thicker; extremity of costal space broader; second vein after the middle much more bent, so that the following space is broader.

South France.

17. Cloeon verna.

Pallide ferruginea ; thorace piceo, ochraceo maculato ; setis pallidis fusco punctatis ; pedibus obscuris.

Baëtis verna, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 66, 16.
Cloë verna, *Pictet, Hist. Nat. Neur. Eph.* 270.

a. England. Presented by F. Walker, Esq.

18. Cloeon autumnalis.

Pallide fusca ; thoracis lateribus ochraceis ; setis longissimis pallidis ; pedibus luridis.

Baëtis autumnalis, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 67, 17.
Cloë autumnalis, *Pictet, Hist. Nat. Neur. Eph.* 270.

England.

19. Cloeon cingulata.

Gracilis, fusca ; abdominis segmentorum marginibus pedibusque posterioribus luridis ; alis hyalinis.

Baëtis cingulata, *Steph. Ill. Brit. Ent. Mand.* vi. 67, 18.
Cloë cingulata, *Pictet, Hist. Nat. Neur. Eph.* 271.

a. England. Presented by F. Walker, Esq.

20. Cloeon ochracea.

Pallide rufo-ochracea ; pedibus pallidioribus ; alis hyalinis costa concolore ; setis pallidis fusco subpunctatis.

Cloëon ochraceum, *Steph. Ill. Brit. Ent. Mand.* vi. 68, 2.
Cloë ochracea, *Pictet, Hist. Nat. Neur. Eph.* 271.

a. England.

21. Cloeon hyalinata.

Incarnata ; pedibus pallidioribus ; alis hyalinis, venis obsoletissimis.

Cloëon hyalinatum, *Steph. Ill. Brit. Ent. Mand.* vi. 68, 3.
Cloë hyalinata, *Pictet, Hist. Nat. Neur. Eph.* 271.

England.

22. Cloeon albipennis.

Nigra ; abdominis basi pallida apice fusco ; pedibus pallidis, geniculis nigricantibus ; alis hyalinis.

Cloëon albipenne, *Steph. Ill. Brit. Ent. Mand.* vi. 69, 4.
Cloë albipennis, *Pictet, Hist. Nat. Neur. Eph.* 271.
Ephemera albipennis ? *Fabr. Ent. Syst.* ii. 70.

England.

23. Cloeon unicolor.

Rufescente-ochracea ; pedibus pallidioribus ; setis albis immaculatis ; alis hyalinis ; costa apicem versus fuscescente.

Cloëon unicolor, *Curt. Phil. Mag.* 1834. *Steph. Ill. Brit. Ent. Mand.* vi. 69, 5.
Cloë unicolor, *Pictet, Hist. Nat. Neur. Eph.* 271.

England.

24. Cloeon cognata.

Piceo-rufa ; abdominis basi pallidiore ; pedibus setisque luridis, his fusco punctatis ; alis hyalinis.

Cloëon cognatum, *Steph. Ill. Brit. Ent. Mand.* vi. 69, 6.
Cloë cognata, *Pictet, Hist. Nat. Neur. Eph.* 272.

England.

25. Cloeon dimidiata.

Castaneo-fusca; prothoracis lateribus puncto ochraceo; pedibus stramineis.

Cloë dimidiata, *Pictet, Hist. Nat. Neur. Eph.* 272.
Cloëon dimidiatum, *Curt. Phil. Mag.* 1834, 121. *Steph. Ill. Brit. Ent. Mand.* vi. 69, 7.

England.

26. Cloeon virgo.

Pallida; oculis nigris; femoribus anticis apicem versus obscuris; alis hyalinis.

Cloëon virgo, *Steph. Ill. Brit. Ent. Mand.* vi. 70, 8.
Cloë? virgo, *Pictet, Hist. Nat. Neur. Eph.* 272.
Ephemera virgo? *Oliv. Latr. Hist. Nat. Ins.* xiii. 98.

England.

Genus 6. CÆNIS.

Oculi remoti, maris simplices. Pedes bene determinati. Alæ duæ, venis transversis paucis.

Cænis, *Stephens; Pictet.*
Ephemera, p., *Fabr.*
Brachycercus, *Curt.*
Oxycypha, *Burm.*
Ephemeræ trisetæ, p., *Zett.*
Cœnidæ, *Newman.*

Eyes simple in both sexes, and always separated by a broad interval: wings two, much rounded on the internal border, fan-shaped, almost without transverse veins: body short and broad: ungues of the tarsi terminated by two small laminæ; three tail-bristles of equal length, very long in the male, and very short in the female.

1. Cænis lactea.

Cinerea ; setæ caudales immaculatæ ; pedes anteriores cinerei.

Oxycypha lactea, *Burm. Handb. Ent.* ii. 796, 1.

(Subimago) Brachycercus chironomiformis, *Curt. Phil. Mag.* 1834.—*Ochracea nitida ; oculis nigris ; pedibus pallidis ; alis lacteis, costa fusca.*

Cænis chironomiformis, *Steph. Ill. Brit. Ent. Mand.* vi. 62, 6.
Cænis lactea, (*Hoffm. MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 276, 1, pl. 43, f. 1—4 ; pl. 44.

Europe.

2. Cænis grisea.

Flava ; setæ caudales immaculatæ ; pedes anteriores albi.

Cænis grisea, *Pictet, Hist. Nat. Neur. Eph.* 278, 2, pl. 45, f. 1, 2.

Switzerland.

3. Cænis argentata.

Cinerea ; setæ caudales fusco obscuro pallidoque indistincte annulatæ.

Cænis argentata, *Pictet, Hist. Nat. Neur. Eph.* 279, 3, pl. 43, f. 6.

Switzerland.

4. Cænis varicauda.

Flava ; setæ caudales nigro flavoque scite annulatæ.

——— *Descript. Egypte, Neuropt.* pl. 2, f. 6 (mas), f. 7 (fœm.)
Cænis varicauda, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 281, 4, pl. 43, f. 5.

Egypt.

5. Cænis luctuosa.

Nigro-fusca aut nigra ; pedes anteriores flavi, distinctissime fusco notati ; alarum venæ costali excepta indistinctæ.

Oxycypha luctuosa, *Burm. Handb. Ent.* ii. 797, 2.
Cænis luctuosa, *Pictet, Hist. Nat. Neur. Eph.* 283, 5, pl. 45, f. 3.

Germany.

6. Cænis oophora.

Nigro-fusca aut nigra ; pedes anteriores omnino flavi ; alarum venæ sat distinctæ.

Cænis oöphora, (*Kollar, MSS.*) *Pictet, Hist. Nat. Neur. Eph.* 284, 6, pl. 45, f. 4.

Sardinia.

7. Cænis dimidiata.

Piceo-nigra ; abdomine pallido ; pedibus ochraceis ; alis lacteis costa fusca.

Cænis dimidiata, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 2. *Pictet, Hist. Nat. Neur. Eph.* 286.
Brachycercus minimus, *Curt. Phil. Mag.* 1834, 122.

England.

8. Cænis brevicauda.

Piceo-fusca ; abdomine pedibusque pallidis ; setis brevibus ; alis albidis, costa fusca.

Ephemera brevicauda, *Fabr. Ent. Syst.* ii. 69.
Cænis brevicauda, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 3. *Pictet, Hist. Nat. Neur. Eph.* 286.

a, *b*. England.

9. Cænis Harrisella.

Pallida; alis hyalinis, costa concolore.

Ephemeron, *Harris, Exp.* pl. 6, fig. 3.
Brachycercus Harrisellus, *Curt. Phil. Mag.* 1834, 122.
Cænis Harrisella, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 4. *Pictet, Hist. Nat. Neur. Eph.* 286.

England.

10. Cænis pennata.

Thorace lato fusco-ferrugineo; abdomine pedibusque albidis; oculis atris; setis brevibus pennatis.

Cænis pennata, *Steph. Ill. Brit. Ent. Mand.* vi. 61, 5. *Pictet, Hist. Nat. Neur. Eph.* 286.

England.

11. Cænis interrupta.

Atra, nitida; abdomine pallido, strigis duabus dorsalibus atris interruptis; pedibus fuscis; alis fuscescentibus, costa saturatiore.

Cænis interrupta, *Steph. Ill. Brit. Ent. Mand.* vi. 62, 7. *Pictet, Hist. Nat. Neur. Eph.* 287.

England.

12. Cænis macrura.

Fusco-nigra; abdomine piceo; pedibus piceo-fuscis; alis hyalinis, costa fusca; setis longissimis.

Cænis macrura, *Steph. Ill. Brit. Ent. Mand.* vi. 60, 1.

England.

13. Cænis hilaris.

Alba, minuta; stethidium pallide fulvum; abdomen punctis lateralibus fuscis.

Ephemera hilaris, *Say*, *Journ. Acad. Nat. Sci. Phil.* viii. 43.

White, minute: eyes black, double: stethidium pale fulvous: pleura and pectus with a few abbreviated dusky lines: abdomen depressed, with three brownish punctures on each side towards the tip: setæ long: wings ample; costal border slightly dusky. Length one-tenth of an inch.

Indiana.

14. Cænis diminuta, Mas.

Fulva; abdomen testaceum; setæ albæ, corpore quadruplo longiores; pedes albi, antici fasciis duabus vel tribus nigricantibus; alæ limpidæ, venis albis ad costam nigricantibus.

C. hilaris, var.?

Male.—Tawny: abdomen pale testaceous, not longer than the thorax: setæ white, about four times the length of the body: legs white: fore-legs with two or three blackish bands: wings limpid; veins white, blackish along the fore border. Length of the body $1\frac{1}{4}$ line: of the setæ 6 lines; of the wings 3 lines.

a. St. John's Bluff, E. Florida. Presented by E. Doubleday, Esq.

15. Cænis Sinensis.

Fusco-fulva, subtus testacea; antennæ albidæ, articulis 1*o et* 2*o apice fuscis; thorax testaceo bivittatus; abdomen album, basi et apice fuscum; alæ limpidæ, venis albis.*

Brownish tawny, testaceous beneath: antennæ whitish; tips of the first and second joints brown: thorax with two slender, testaceous stripes: abdomen white, hardly twice the length of the thorax, brown at the base and towards the tip: wings limpid, veins white, few and slender. Length of the body 2 lines; of the wings 4 lines.

a. China. Presented by G. T. Laye, Esq.

16. Cænis perpusilla.

Testacea ; setæ albæ, corpore quadruplo longiores ; pedes albi ; alæ limpidæ, antice subcinereæ, venis albis.

Pale testaceous: abdomen a little longer and paler than the thorax: setæ white, about four times the length of the body: legs white: wings limpid, with a grayish tinge on the fore border of the fore-wings; veins white. Length of the body 1¼ line; of the setæ 6 lines; of the wings 3 lines.

a. Ceylon. Presented by R. Templeton, Esq.

Genus 7. OLIGONEURIA.

Oculi maris simplices. Pedes informes; tarsi filiformes. Alæ quatuor, venis transversis paucis.

Oligoneuria, *Pictet*, *Hist. Nat. Neur. Eph.* 289.

Wings four; fore-wings triangular, with only seven longitudinal veins, and with some cross-veins near the fore border; hind-wings large, with four longitudinal veins, without cross-veins: legs distorted; tarsi filiform: three short tail-bristles.

1. Oligoneuria anomala.

Oligoneuria anomala, (*Kollar*, *MSS.*) *Pictet*, *Hist. Nat. Neur. Eph.* 291, pl. 46, 47.

Brazil.

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